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PHILOLOGICAL INTRODUCTION
TO
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A PHILOLOGICAL INTRODUCTION ,
TO
GREEK AND LATIN.

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A PHILOLOGICAL INTRODUCTION
TO GREEK AND LATIN
FOR STUDENTS.

TRANSLATED FROM THE GERMAN OF
FERDINAND BAUR, DR. PH.,
Professor in Maulbronn.

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M. H. W.

PREFACE.

THE translators of the following little treatise have simply endeavoured to put Professor Baur's ideas before English students. The only liberty they have taken is that of breaking up the German sentences, and thus in some degree making the work less difficult than the original, although it has not even now the doubtful merit of easiness. English equivalents are given for Greek and Latin words wherever Professor Baur has given German renderings.

The translators' best thanks are due to the Rev. A. H. SAYCE and the Rev. G. W. COX for many valuable suggestions while the work was passing through the press.



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The following abbreviations are used :—

E.	English.	O. H. G.	Old High German.
H. G.	High German.	O. L.	Old Latin.
O. E.	Old English.	O. L. G.	Old Low German.
O. G.	Old German.	Skr.	Sanskrit.



A PHILOLOGICAL INTRODUCTION
TO
GREEK AND LATIN.

I.—THE NATURE AND ORIGIN OF LANGUAGE.

1. **L**ANGUAGE is the phonetic representation of
thought: thought vocalized.

It is no work of human art, arbitrarily invented for the purpose of communicating thought; but a product which has grown naturally out of the essential development of human reason: it has originated φύσει, not θέσει.

There are two current theories on the origin of language—(α) the so-called onomatopœic, which refers language to the mere imitation of sounds, as *cuckoo*, *rataplan*, *tomtom*; (β) the interjectional, which refers it to the sounds arising from sensation, mere animal cries—*ah*, *ache*, *ἄχος*.

Neither of these can independently and alone explain the origin of language.

Reason and language are inseparable. Without language, there is no reason; without reason, there is no

language. Or, to put this in other words, there are no definite and clear thoughts, except such as can find expression in articulate sound; there are no articulate sounds except such as are intimately connected with definite conceptions and ideas. Thought which can be grasped is impossible without language. Words and conceptions exist only for each other,—words being the phonetic embodiments and the only exponents of conceptions.

2. All phonetic expressions are originally the reflex of impressions on the senses, and this is true whether we consider them under the form of an imitation of sounds, or of interjections, *i.e.* sounds arising from a sensation.

The phonetic expressions which, primarily, are either imitations of sounds, or interjections, are, secondarily, tokens of the object which produces the sound, or causes the sensation.

A number of phonetic expressions for identical impressions on the senses are fused into one collective expression, and this becomes a sign of a general conception which includes them all.

From an unlimited number of such possible conceptions, together with their phonetic expressions, a limited selection is made by language; each of these selected expressions, or phonetic types, becomes the sign of some one conception or object essential to human life.

The process by which these are selected is instinctive and rational, not arbitrary or conventional.

These phonetic types are the fundamental elements

of language ; and to discover them is the goal and result of philology. They form, for us, the irreducible residuum of linguistic analysis, or, in other words, that which cannot be further explained.

3. These elementary phonetic types or roots represent originally impressions on the senses, and convey concrete material meanings.

They then become signs of ideas, which, though concrete, are extremely wide and general, and may therefore be called abstract.

The same idea being connected with a variety of objects—some concrete, others abstract—all such objects may be ranged under a general category.

Thus, for example, *equus*, ἵππος, anciently ἵκκος, Sanskrit *aśvas*, from the root *ac*, *sharp* or *quick*, may be compared with *acus*, a *needle*.

All abstract words, which express immaterial conceptions, had originally material concrete meanings, and are borrowed by metaphor from phenomena of the world of sense.

Thus compare ἄνεμος, *animus*; *spiritus*, *spirare*; θυμός, *θύω*, *I boil*; αἶών, *aevum*, *time*, which last originally came from the root *i*, *to go*.

Metaphor is the transference of a name from the object to which it properly belongs to other objects which appear in some measure to participate in the peculiarities of the first.

This is done by means of the imagination, which is especially vigorous in the early periods of language.

Metaphor is an essential implement of language, a powerful means of linguistic development.

II.—THE ELEMENTS OF LANGUAGE.

1. Single letters, vowels, and consonants, are not the elements of language. Letters in themselves have no meaning ; they contain no intelligible principle. Lingual sound only can be analysed in them, not language itself.

The elements of language are those sounds which are full of significance, or complex sounds, the so-called roots, or “exponents of conceptions.” Through the union of these, whether in one word, or in a number of words, thought can find expression.

2. Complete lingual sound, however, as exhibited in any one language, expresses two things—

(a) Meaning, that is to say, perceptions, ideas, and conceptions.

(β) Relation to something else which lies beyond, and is not contained in the sound.

Complete lingual sound then contains a material, or radical, and a formal element, a predicative and a demonstrative root ; and to discover these is the work of a complete grammatical analysis.

Complex sounds, which express meaning only, and which remain when all principle of relation is abstracted from a given word-form, are roots, in the narrow sense of the word. Roots are the indivisible atoms of lan-

guage, the primitive and ultimate elements of words, which cannot further be analysed.

But the word, the complete form of language, is composed of meaning and relation, predicative and demonstrative elements united in a phonetic whole. The root and the word are the two poles between which the analysis of language moves.

The root is the expression of a general idea. If on the one side we consider this analytically, and from the stand-point of complete language, it is a pure abstraction of diffused and indistinct meaning. It is, therefore, not used by itself in more developed language.

On the other side, however, if considered synthetically, and followed from its origin through all its phases and changes, it is an original word. It existed for itself in the creative period of language; it is a real living germ, growing, and ever thrusting forth new shoots.

But when words are formed, whatever is added to the root as an affix, was itself, originally, an independent, self-existent word. It has coalesced with the root as its suffix, in virtue of the innate power of growth possessed by the root, and in the process of amalgamation has been worn down to mere syllables and letters.

3. The word is the single phonetic expression of a complete and independent perception. It allows this perception to appear either as an existing entity or as an incident of time, as a noun or as a verb.

The noun and the verb are both, for us, equally original forms of lingual expression. In itself, however,

the distinction between the parts of speech must be considered as a product of the development of language.

The root, considered abstractedly, is not concerned with this distinction. It necessarily takes to itself further elements of language, and thus out of the universality of its meanings it gradually assumes nominal and verbal expression ; differentiates itself into noun and verb.

All the relational elements of the noun and of the verb—that is to say all nominal and verbal suffixes, all inflexions, whether of cases or persons—are themselves originally roots, demonstrative or pronominal.

4. Between the root and the word lies the stem, that which remains after grammatical analysis has taken away the inflexional endings. It is not a mere root, therefore it is not unconcerned with the difference between noun and verb ; it has in itself, over and above the root, a general nominal or verbal formative element. This is far more relative than the root, and is negative only to the more definite conceptions. Thus there are nominal and verbal stems.

The word then may be defined as the complete combination of sounds which express meaning and relation. It contains, so far as root and stem are not coincident, Sec. 38, 2, three elements—the Root, the Stem, the Inflexion.

III.—THE DIVISIONS OF PHILOLOGY.

The material basis of sound, which is originally physiological, underlies the complete linguistic form as well as its elements.

It is conditioned by the constitution of the human organs of speech, and is again, in each language, individually modified by usage. The sounds which are its separate constituents, enter into union with each other in part, only according to the definite laws of each language and the laws of sound.

The science of sound treats these laws as its elementary part, and thus results the division of Philology into the science of sound—Glottology, and the science of form—Grammar.

The latter, considered generally, in the widest sense of the science of lingual form, is in part the science of root and stem formation, in part the science of word formation or inflexion.

IV.—CLASSES AND STAGES OF LANGUAGE.

1. Isolating or radical languages. These consist of sounds of unalterable meaning, susceptible of no modification—mere roots. There is in them no difference between root and word, or between noun and verb; every word is a root; there are no inflexions. Such is Old Chinese.

2. Agglutinative languages. In these, two or more roots grow together in a single word. One of these maintains its radical independence, and remains unaltered by phonetic decay. The others constitute a dependent affix, as prefix, suffix, or infix, that is to say the addition of a sound of relation at the beginning, at the end, or in

the middle of a word. The word is thus a conglomerate without strict unity. Such is the Turanian family of languages.

3. Inflexional languages, of which the following are the steps. The root and the modifications made in it by the sounds of relation are blended together, Sec. 2, 2, β . The root is capable of a regular alteration with a view to the expression of relation, and of the addition to the root of the sound expressing relation. These are the Semitic and Indo-Germanic branches of language. The two branches are thoroughly different in grammatical construction, but this does not exclude the possibility of an original identity of their material elements, that is to say of the roots.

The characteristic tokens of these languages are—

(α) A regular change of the root vowel, strictly limited to a definite order of vowels.

(β) The addition of the expression of relation exclusively at the end of the root in the form of suffixes. To this the only exceptions are the verbal augments and the reduplications, of which more hereafter.

(γ) That all their roots are monosyllables.

V.—THE INDO-GERMANIC, OR ARYAN FAMILY OF LANGUAGES.

[The word Aryan is here used in its widest sense.]

The original Indo-Germanic language—the existence of which is inferred from a consideration of known allied languages—divides into,



1. The Asiatic or Aryan group. [The word Aryan is here used in its narrower sense.]

(a) The old Indian language of the Vedas, which was afterwards the written language Sanskrit. This was the elder sister and not the parent of the other languages of the family.

(β) The Iranian languages. The word Iran or Eran is derived from Arya. These are the old Bactrian or Zend (East Iranian), and old Persian (West Iranian, the language of the Achæmenid cuneiform inscriptions).

2. The south-western European group: Greek, Italian including Latin, Umbrian and Oscan, and Celtic.

3. The northern European group: Slavo-Lithuanian and German, this last including Gothic, Low German and English, High German and Scandinavian.

VI.—THE GRÆCO-LATIN LANGUAGE.

1. The Græco-Italian group of languages is a link in the chain of language which extends from India to Western Europe. It is further removed from the original Indo-Germanic language than is the old Indian, but is nearer to it than is the Slavonic-German group.

Sanskrit, Greek, and Latin are sisters, belonging to the same order and class of languages, but the first has a character of greater originality. Greek, however, exhibits high antiquity, especially in the preservation of the old tense and mood forms.

2. In the Greek language the Doric and Æolic dialects are older than the Ionic-Attic.

The Greek forms, as we find them in classical authors, have arisen through phonetic decay, through degradation and mutilation of an older and fuller form. They have gone through a series of processes of paring and decomposition, by which the meaning of the language is refined in the same proportion as are its forms. Its historical development, at the same time, lies under the physical law of *vis inertiae*. The original simple and fundamental vowels become changed and modified.

3. The sounds of Latin and the Italian languages are—so far as the consonants are concerned—in much closer relation with the original sounds than those of the Greek.

Compare, for instance, *ves* in *vestis* with ϵ in $\epsilon\nu\nu\mu$ = ἔσωνυμι , Sanskrit *vas*; $\eta\mu$, *semi*, originally *semis*; $\epsilon\pi\tau\acute{\alpha}$, *septem*, Skr. *saptán*; $\tau\acute{\epsilon}\sigma\sigma\alpha\pi\epsilon\varsigma$, *quattuor*, Skr. *katvaras*; $\tau\acute{\iota}$, *quid*, originally *ki*; $\eta\pi\alpha\rho$, *jecur*, Skr. *jakrt*; $\nu\acute{\epsilon}\omicron\varsigma$, *novus*, Skr. *navas*; $\epsilon\pi\omicron\mu\alpha\iota$, *sequor*, Skr. root *sak*; $\iota\pi\pi\omicron\varsigma$, nearly the original $\iota\kappa\kappa\omicron\varsigma$ = $\iota\kappa\omicron\varsigma$, *equus*, Skr. *açvas*; $\omicron\upsilon\lambda\epsilon$, *salve*, $\iota\omicron\varsigma$, *virus*, etc.

On the other hand, in the case of the vowels, Latin is monotonous and weak, in comparison with the manifold development and subtle divisions of the Greek vowel system. It is poor in diphthongs, and original old Latin diphthongs become modified into single sounds.

PART I.

THE SCIENCE OF SOUND.—GLOTTOLOGY.

I. VOWELS.

VII.—ANALYSIS OF SOUNDS IN GREEK AND LATIN

1. The Indo-Germanic fundamental vowels are *a*, *i*, *u*. The first of these, made by opening the lips as widely as possible, is clear and hard, and incapable of any transition into consonants. The last two, made by contracting more and more the opening of the lips, are weak and fluid, nearly related to the semi-vowels *j*, or jod, and *f*, or vau. [N.B. The letter *j* is retained throughout the following pages because of necessity so printed in Latin words. It answers, however, to the sound of the English *y*.]

These fundamental vowels are originally short, and therefore short in all roots: they have been gradually extended and lengthened by the reception of formal elements. The diphthongs *ai* and *au* are made by the combination of the hard *a* with the weak *i* and *u*.

2. *A* was first modified into *e* and *o*, or rather was differentiated into *a*, *e*, *o*. Then arose further diphthongs, *æ* and *œ*, connected with *ai*; *ev* and *ov* connected with *au*.

From the gradual change of α , ϵ , o , to $\bar{\alpha}$, η , ω , there arose other spurious diphthongs from the combination of these hard vowels with ι . These had a j sound, which is now wholly lost, and hence the iota subscript $\alpha\iota$, $\eta\iota$, $\omega\iota$. Others arose through the combination with υ — $\bar{\alpha}\upsilon$, $\eta\upsilon$, $\omega\upsilon$; $\bar{\alpha}\upsilon$ Attic-Doric, $\eta\upsilon$ Attic-Ionic, $\omega\upsilon$ Ionic.

3. The old Latin diphthongs were au , ou , eu ; ai , oi , ei ; which were modified into the single sounds $\bar{o}$, $\bar{u}$; ae , oe , $\bar{e}$, $\bar{i}$. Compare *Claudius*—*Clodius*; *jous*—*jus*; *Lucius* = $\Lambda\epsilon\acute{\upsilon}\kappa\iota\omicron\varsigma$; *aquai*—*aquae*; *ploirume*—*plurimi*; $\pi\omicron\iota\nu\acute{\eta}$ —*poena*—*punio*; *oenus*—*unus*; *populei*—*populi*; *foidos*—*foedus*; *hoi*—*hi*; $\omicron\iota\nu\omicron\varsigma$ —*vinum*; $\omicron\iota\kappa\omicron\varsigma$ —*vicus*; *amem* = *amaim*, an archaic form.

VIII.—CHANGES OF VOWELS.

1. A-Series. The original α vanishes altogether, as in $\pi\iota\pi\tau\omega$ = $\pi\iota\pi\epsilon\tau\omega$ from $\pi\epsilon\tau$ = *pat*; in the same way, $\gamma\acute{\iota}\gamma\omicron\mu\alpha\iota$ from $\gamma\epsilon\nu$ = *gan*.

It is weakened or thinned into i , generally before two consonants: $\iota\sigma\theta\iota$, connected with $\xi\sigma\tau\omega$ = *asdhi* from the root $\epsilon\varsigma$ = *as*; $\iota\sigma\tau\acute{\iota}\eta$ Ion. connected with $\xi\sigma\tau\acute{\iota}\alpha$, *Vesta* from *vas* = *us* in *uro* = *uso*; $\iota\pi\pi\omicron\varsigma$, Sec. 6, 3; $\kappa\acute{\iota}\rho\eta\eta\mu\iota$ — $\kappa\epsilon\rho\acute{\alpha}\nu\eta\mu\iota$; $\pi\acute{\iota}\tau\eta\eta\mu\iota$ — $\pi\epsilon\tau\acute{\alpha}\nu\eta\mu\iota$; $\pi\acute{\iota}\lambda\eta\mu\alpha\iota$, $\pi\acute{\iota}\lambda\eta\acute{\alpha}\omega$ — $\pi\epsilon\lambda\acute{\alpha}\omega$; $\sigma\kappa\acute{\iota}\delta\eta\mu\alpha\iota$ — $\sigma\kappa\epsilon\delta\acute{\alpha}\nu\eta\mu\iota$; $\chi\rho\acute{\alpha}\omega$ — $\chi\rho\acute{\iota}\mu\pi\tau\omega$, $\acute{\epsilon}\gamma\chi\rho\acute{\iota}\mu\pi\tau\omega$; $\sigma\kappa\acute{\eta}\mu\pi\tau\omega$ ($\sigma\kappa\alpha\pi$)— $\sigma\kappa\acute{\iota}\mu\pi\tau\omega$, $\acute{\epsilon}\nu\sigma\kappa\acute{\iota}\mu\pi\tau\omega$, Il. XVII. 437; $\pi\acute{\iota}\tau\eta\omega$, $\pi\acute{\iota}\tau\eta\acute{\epsilon}\omega$ — $\pi\epsilon\sigma\acute{\epsilon}\iota\nu$ —*pet*, *pat*; $\tau\acute{\iota}\kappa\tau\omega$ — $\tau\epsilon\kappa$, *tak*. This takes place regularly in the present reduplication, Sec. 61, 3; and in Latin compounds: *facio*, *conficio*, compare *Juppiter*.

It is modified into *e*: ἔδω = *admi*, ἔζομαι from ἐδ = *sed* = *sad*; ἐστι = *asti*; into *o*: ποδός from *pad*; εἵκοσι = *Fíkati* *Æol.*; ἄκρις—ὄκρις; ὄρχαμος—ἄρχω; ἀγκών—ὄγκος; ἄμ —ὄμοῦ.

The original *a* is retained in ἀκωκή (*ac*): ἄγω (*ag*); λαμβάνω—λαβ; πατήρ, stem πατερ, *patar*.

a and *ε* are interchanged: in ἄτερος *Dor.*—ἕτερος; ἕταμον ἕτεμον; τρέφω ἔτραφον; κτείνω (κτενῖω) ἔκτανον, κτανῶ.

Gradual changes. First stage: *ε* to *ο*, especially in the formation of noun stems: φόρος from φέρω *bhar*; τόκος from τεκ; λόγος from λεγ; ἔκτονα from κτεν; *a* to *ā*, *η* (*ā* the older and *Doric*; *η* *Ion.-Att.* form gradually descended from *a*); λέληθα, λήθη from λαθ; ἔαγα, ἔηγα from *Faγ*; εἴληχα from λαχ; εἴληφα from λαβ. Compare *plango*, *plāga*; *āgo*, *ambāges*, *ēgi*; *tango*, *contāgio*. Second stage: *ā*, *η* to *ω*: ἔρρωγα, ῥήγνυμι, *Fραγ*; πτώξ, πτώσσω, πτωσκάζω *Il. IV. 372*—πτήσσω—πτακ; ἄρωγός, ἀρήγω; τρώγω, ἔτραγον; ἀκωκή, ὠκύς from *āk* in ἀκή, ἄκρος. Compare *ācies*, *ācus*, *ācuo*, *ācer*, *ōcior*; *lābare*, *lābi*, *lābes* = *fall* and *stain*, λώβη *shame*.

2. I-Series. The fundamental vowel is *ī* in ἴμεν = *imasī*, ἴθι from the root *ι* *to go*; ἔλιπον from λιπ, ἔπιθον from πιθ. The first stage is into *ει*, *ī*: εἴμι, πείθω, στείχω, στιχ in στίχος. The second stage is into *οι*: οἶμος from εἴμι, *ι*; λέλοιπα, πέποιθα, στοῖχος; οἶδα—εἰδῶ, εἰδέω connected with ἰδέω, *Il. XIV. 235*, as ἰδνῖα is connected with εἰδνῖα—ἴσμεν = ἰδμεν, *Fiδ*; ἀμοιβή—ἀμείβω. Compare *fīdes*, *fīd*, *perfidus*, *fīdo* = *feido*, *infīdus*, *foedus*, *foidos*; λῖς, λιτός, *smooth*, λείος, *lēvis*, *leivis*; *vīcus*, οἶκος = *foikos*; *vīnum*, οἶνος = *foinos*.

3. U-Series. The fundamental vowel *u*, *u* in *σύ*, *tu*, originally *tū*; *ἔφυγον*, *φυγή*, *φυγ*, *fug*; *ζυγόν*, *jug* in *jūgum*, *jungo*. The first stage is into *eu*: *φεύγω*, *ζεύγνυμι*, *ῥεύμα*, from the root *ῥυ*, *πνεῦμα*—*πνυ*. The second stage is into *ou*, *ū*: *ἔλυθ*—*ἐλεύσομαι*—*εἰλήλουθα*; *σπουδή*—*σπεύδω*; *σοῦμαι* connected with *σείομαι*, root *συ*; or into *ω*: *ζώννυμι*, *ζωστήρ*, from the root *ζυ* = *ζυγ* in *ζεύγνυμι*; *χώννυμι* from *χέω* = *χέω* = *χέω*, root *χυ*. Compare *jūs*, *right* = *yoke*, *bond* = *jous*, from *ju* = *jug* = *ζυ*, *ζυγ*, *to bind*, in *jungo*; *jūs*, *soup* = *jous*, from *ju* = *ζυ*, *to mix*, in *ζύμη*, *ζωμός*; *ūro* = *ouso*, from *us*, compare *εὔω*, *εὔω*, *I singe*.

IX. CHANGE OF VOWELS UNDER CONSONANTAL INFLUENCE.

1. The vowels were affected by the original Indo-Germanic spirants *j*, *v*, *s*, Sec. 11. The Greek language resisted their influence, and hence,

(a) They were changed into vowels: *j* into *ι*: nominal-suffix *ja* in *πάτριος*, *ἄγιος*; comparative-suffix *ιον*, originally *jans*, in *ἡδίων*, stem *ἡδιον*; genit. sing. of the O-stems into *οιο* from *οjo*, originally *osjo*, Sec. 47, 2; optative-element *ιη* from *ja*: *εἶην* = *ἐσjην* = *ἐσjημ* = *asjam*; Doric future into *σιω* from *sjω*, *πραξίω* = *πραγsjω*. *v* spirant *F* to *υ* vowel: *δύο*, *duo* = *δφω*, Sanskrit *dva*, *bis* = *dvis*; *χεύω*, *πνεύω* *Æol.*, from *χέφω*, *πνεφω*, *χυ*, *πνυ*; compare *ἀνίαχος* Il. XIII. 41 = *ἀφιφαχ*; *ιαύω* from *ā*; *ταναῦποδα* Od. IX. 464 = *ταναφπο*; *ταλαύρινος*. *j* to *ε*: *πλευσοῦμαι* = — *εομαι* = — *σjομαι*; so also *φευξοῦμαι*; compare *κενέος* = *κενjος*, *στερεός*, *ἡγορέη*.

(b) *j*, *v* were transposed as the vowels *ι*, *υ* before con-

sonants: *ι* in κτείνω=κτενῖω; so φαίνω, φθείρω, ὀφείλω; μέλαινα=ανῖα; so again μάκαιρα, λέαινα, δέσποινα=δεσποτινῖα, νεύαιρα, *the abdomen*, δότεира, τέρινα; χείρων=χερῶν, μείζων=μεγῶν, κρείσσων=κρετῶν from the stem κρατ in κρατύς ($\zeta = \gamma j$, $\sigma\sigma = t j$), strictly speaking therefore *ι* is epenthetic, or is a doubled power of *j*; it affects the consonant, which becomes a mixed sound, Sec. 34, 3, and at the same time passes over as *ι* into the preceding syllable; compare φοίνιος from φόνος, connected with φοινός Il. XVI. 159. *v* = *f*: γουνός = γονῖος from γόνυ, γούνα, compare *genua*, δοῦρα; οὔλος, Ion. = ὄλφος, ὄλος, *salvus*, old Latin *sollus*; ἐλαύνω = ἐλανῶ; compare *nervus*, νεῦρον.

(c) *j*, *v*, *s* disappear, whence it follows that vowels are massed together and contracted. *s*, φέρη = φερεσαι; μένους from μενεσος; εἶην from ἐσῖην; εἰπόμην from ἐσεπομην from ἐπ = σεπ, compare *sequor*; εἶρπον = ἐσερπον from ἔρπω = σερπω. *v* = *f*, νέος = νεῖος, *novus*; εἰργασάμην = ἐφεργ; εἶπον, ἔειπον = ἐφεπεπον, redupl. aor. from the root *ῑεπ*. *j*, in so-called contracted verbs in αω—εω—οω, from αῖω, εῖω, οῖω.

2. A syllable was lengthened in compensation for the loss of consonants: of *f*; the Ion.-Ep. genit. βασιλῆος, τοκῆος, νῆος = βασιλεῖος, ναῖος, and thence with a change in quantity came the Attic form εως; of *j* in Homeric πόλῃος = πολεῖος, Attic πόλεως; of *v* in Ionic ξέινος, from Æolic ξέννος = Doric ξένῖος, Attic ξένος; of *v* before *σ*: φέρουσι = φερονσι = φεροντι; τοῦς = τούς; πᾶς = πανς; τιθείς = τιθενς = τιθεντι; χαρίεις = χαριεντις, τιμήεις —contracted τιμῆς, not τιμῆς, Il. IX. 605, since the *ι* is not organic, = τιμηντις; of *σ*; εἰμί from ἐσμι, connected

with the Æolic *ἔμμι, εἶμαι*=*ἔσμαι* ; in the compound aor. when *σ* disappears after *λ, μ, ν, ρ*: *ἔνειμα* = *ἐνεμσα* ; *ἔφηνα* = *ἐφανσα* from the root *φαν* ; *ἔστειλα* = *ἐστελσα, στελ* in *στέλλω* = *στελῶ*, connected with the Æolic *ἔστελλα* with assimilation of the *σ* ; *ἐκάθαρα* ; in the nomin. singul. when *ς* disappears : *ποιμήν* = *ποιμενς* ; *πατήρ* = *πατερς* ; *εὐμενής* = *εὐμενεος* ; *φέρων* = *φεροντς* ; *δαίμων* = *δαιμονς*. Compare *pēs* = *pēds* connected with *pēdis* ; *cāsum* = *cadtum* ; *abiēs, abiētis* ; *exāmen, exāgmen* ; *flāmen, flagmen*, compare *flagrare, φλεγ* ; *contāmen* = *contagmen* ; *ājō* = *agio* ; *māior* = *māgior* ; *jūmentum* from *jūg* ; on the other hand, *stīmulus, stīlus*, connected with *instigare*, from *stig* ; *pōno* from *posno, posino*.

3. The sound of *ι* was introduced into the preceding syllable when the word ended in *σι* : in the dat. plur. *ταῖς, τοῖς* from *ταῖσι, τοῖσι*, Ion.-Ep. *τῆσι*, = *tasi, tosi*, pronoun-stem *ta*, suff. *σι* ; in 2 pers. sing. *φέρεις* = *φερεσι, φέρης* = *φερησι*.

4. A vowel was inserted after *ρ* and *λ* : *ὀρέγω* connected with *ὀργ* in *ὀργυιά* ; *ἀρήγω* from *ἀρκ*—*ἀρακ* in *ἀρκέω* ; *ταράσσω* from the root *τραχ*, *τέτρηχα* *τραχύς* ; *ἤλυθον* or *ἦλθον* ; *ἀλέξω, ἀλ* in *ἀλαλκεῖν* ; compare *μόλυβος* *plumbum*.

5. A vowel was prefixed occasionally before one, oftener before more than one, consonant : *ἄσταχυς*—*στάχυς*, *ἀστήρ*—*stella*, root *στορ, ster*, Sec. 17, *ἀστράπτω*—*στράπτω* ; *ἀφλοισμός* Il. XV. 607, *φλοῖστος* ; *ἀβληχρός*, *βληχρός*, *soft, weak* ; *ἰγνή, πορπες*, Il. XIII. 212, *γόνυ* ; *ὄφρυς*, H. G. *braue* ; E. *brow* ; *ἐχθές, χθές* ; before simple liquid, and nasal letters : *ἀμύνω*—*μύνη*, *ἀμαλός*—*μαλακός*, *μαλθακός* ; *ἐννέα, ἐννεφα, novem*, *ν* being doubled after *ε*

prefixed; ὄνυξ, *unguis*, H. G. *nagel*, E. *nail*; ὄνομα, originally ὀγνομα, *nomen*; ἐρείπω, ῥίπτω; ἐρυθρός, *rubet*; ἐρεύγεσθαι, *ructare*; ἀράσσω, ῥήσσω; ἐρωή, ῥώομαι; ὀρέγω, *rego*; before F: ἔρση, φερση, ἑέρση = ἐφερση, Il. XXIII. 598; ἑέργω, Sec. 20; εἵκοσι, ἐφεικοσι, or εἴκοσι, *ήκατι*; ἔδνον, connected with ἔδνον, φδνον; before gutturals: ὀδούς, *dens*; ὀδάξ, δάκνω; ὀδύρομαι, δύρομαι; before labials: ὀπίμυς, πίων.

II.

CONSONANTS.

X. THE GREEK CONSONANTAL SYSTEM.

The consonants fall naturally into classes regulated by the nature and duration of their sound; that is to say, according as they are audible or inaudible without a vowel, and according as their sound is momentary or lasting. These classes are,

(1) *Mutes*, or soundless, momentary consonants. These are divided (a) according to the organs which produce them, into Gutturals, κ, γ, χ; Dentals, τ, δ, θ; Labials, π, β, φ. (b) According to their harder or weaker pronunciation or degree of sound, into *Tenues*, ψιλά=“without a breathing,” κ, τ, π; *Medials*, or weak, γ, δ, β; *Aspirates*, or mutes with a breathing added, χ, θ, φ. These last do not exist in Latin, and are designated as foreign sounds by *ch*, *th*, *ph* (on φ = *f*, Sec. 11, 4).

(2) *Semivowels*, or lasting sounds. These are (a) Liquids, and are partly nasal, γ (before gutturals), ν also a dental, μ also a labial ; and partly lingual, λ , ρ . (b) Spirants and Sibilants, breathing and hissing sounds, '(h) , F (v), σ s. To these must also be added Double Consonants, double sibilants or mixed sounds, $\sigma\sigma$ (ss), ξ ($x = ks$), $\psi = \pi\sigma$, ϕs , $\zeta = \delta\sigma$.

XI.—SPIRANTS AND ASPIRATES.

1. J , one of the three original spirants of the Indo-Germanic languages, J , V , S , has disappeared in Greek, and is now only to be recognized by its effects. It is sometimes turned into a vowel, Sec. 9, 1; sometimes assimilated, Sec. 34, 1; sometimes fused down with other consonants into a mixed sound, Sec. 34, 3; sometimes changed at the beginning of a word into the rough breathing; sometimes it disappears altogether in the beginning, Sec. 32, and in the middle of a word, Sec. 9, 1, c.

2. V is retained as f , the digamma, the old *vau*, in the older language—that is to say, in the Doric and Æolic dialects. In the later language, as we find it in the Homeric text, the digamma becomes an aspirate at the beginning of a word, or is altogether absorbed, $\epsilonῖμα$, $\alphaἴνυμι$. In the body of a word it is sometimes absorbed, $\deltaῖς = ovis$, $\nuέος = novus$, $\nuηός = νηφος$; sometimes weakened into the vowel v [y], as in $\nuαῦς$, $\epsilonὔαδεν$, $\betaοῦς$, $Ζεῖς$, compare Jov , Sec. 9, 1; sometimes

assimilated in contracted syllables, Sec. 34, 1, b ; or it is thrust aside by the strengthening of the preceding vowel, οὔλος = ὀλφος, γοῦνα ; compare Sec. 9, 1, b.

This spirant, however, *F* = *v*, survives in its effects, partly in the syllabic augment before a vowel, ἐάγη, ἐφροχόει, even in the Attic dialect, ἐάλων, ἐώρων, ἐωνούμην, partly in the dialect of the Homeric poems. In these its influence is felt both in the quantity of the preceding syllable, and in the elision. In this latter case, however, some wavering may be noticed between the older and more recent Ionic dialects—for example, in ἄναξ and *F*άναξ. Digammated words originally made the preceding syllable long by position—Il. I. 108 ; IV. 18, 214 ; V. 7, 836 ; XIII. 495 ; XVI. 502 ; Od. IX. 196 ; XIV. 479 ; long vowels at the end of a word remained long before it—Il. III. 392 ; VI. 91 ; VIII. 513 ; XVIII. 473 ; Od. X. 510 ; XI. 108 ; XVIII. 56 ; XXI. 405 ; short vowels were not cut off—Il. I. 462 ; V. 161, 757 ; IX. 40 ; XV. 288 ; XVI. 178, 424 ; XXI. 309, and there was instead only an apparent elision.

3. The original *s* remains predominant in Greek at the end of words only, compare Sec. 35, and before mutes. At the beginning of a word it is usually changed into *h*, and between vowels it is wholly thrust out, Sec. 9, 1, c, Sec. 30.

The elision and excision of the original spirants—their alteration, assimilation, and fusion with other consonants—cause remarkable changes in the character of the

original sounds, and are a very noteworthy peculiarity of the Greek language. All the dentals disappear before σ s. So also does ν , with a compensatory lengthening of the preceding vowel, Secs. 9, 2 ; 34, 7.

In Latin, s , between vowels and at the end of a word, is simply changed into r : *Lares* — *Lases*, *eram* from *esam*, *erit*—*esit*, *quaero* — *quaeso*, *arbor*—*arbos* ; it disappears in the middle of a word before m , n , l , d , compare *cano*, *Camena* (*Casmena*), connected with *carmen*, *idem*, and between vowels, *diei*, *spei*, Sec. 47 ; at the end of a word, *parricida(s)*, *familiai(s)*, Sec. 47, and after l , n , r , *sol*, *vigil*, *puer*, *leo* = *leons*.

4. Greek is averse to the accumulation of aspirates, Sec. 34, 5 ; 9.

Latin has no aspirates ; their place is taken by the corresponding breath-sounds. Instead of the dental aspirate θ , we have in Latin at the beginning of a word simply f , Sec. 25. This f is not an aspirated tenuis, ph , but a labial breath-sound = bh ,* and often used for dh and gh . Only in later periods of the language f = ϕ , Secs. 22—25. For the difference of sound between ϕ and f , see Quintilian xii. 10, 29.

XII.—SIGNIFICANCE OF CONSONANTS TO PHILOLOGY.

1. Consonants are the stable element, the skeleton, as it were, of language, which remains generally the same through all the changes of a root. This is true

* Therefore the reduplicated perfect is *fefelli*, not *pefelli*.

not only within each single language, but also in the languages which are akin to each other.

Consonants not only form, phonetically, the fixed bodies of words, but they are also the exponents of thought, the significant elements, which have naturally become interwoven with the conception of a word. They make, therefore, stronger resistance to phonetic changes than do the vowel elements of words. Vowels are exposed to far greater changes; they are fluctuating, tend to melt into each other, and are therefore less easy to grasp.

2. But the consonants of the same root are also subject to numerous changes. These occur in the transition from one Indo-Germanic language, group of languages, or stage of linguistic development, to another, as well as within the same language, during the process of word formation. These changes can be reduced to laws.

3. These laws relate to the consonantal change of sound in a root or a stem, partly in the passage from one Indo-Germanic language to another, according to their grades, partly within each separate language.

The first is the law of sound-shifting; the last is the consonantal law of sound in Greek and Latin.

These laws are the foundation of scientific etymology.

XIII.—ETYMOLOGY.

1. Etymology is the science of what is true and genuine in language, of what is *ἔτυμον*; it is the knowledge of the

true and original signification of a word in conformity with its derivation, and the tracing it down from its stem-word and root-word.

It does not merely show by analysis that a word is generally derived from one which is more original and simple, that is to say from a root ; but, starting from the root, follows the word synthetically and genetically, tracing it through all its wanderings, both within the several languages, and from one to another of those which are related. It explains how one word has been gently and gradually altered into another by the regular law of phonetic change. It discloses especially the laws or analogies which regulate and direct the consonantal changes of sound in the history of language.

2. Therefore the identity or resemblance of the sound, as well as of the meaning of two words, are only of subordinate importance for methodical etymology. Words of quite different sounds, which have not a single letter in common, may be shown by scientific analysis to be words of the same origin ; compare, for example, *χέω*—*fundo*, Sec. 23, *ἀήρ*—*ventus*, *εἶμα*—*vestis*, Sec. 31 ; and others, again, of wholly different meaning, as, for example, *πέτομαι*—*πίπτω*—*peto*, Sec. 18, 37, *φηγός*, *the esculent oak*—*fagus*, *the beech*. The last is an example of the way in which a word may alter its meaning by change of language, time, and country.

In the development of language the successive changes of meaning go hand in hand with phonetic change.

3. But through all changes of form and meaning the original condition of a language, or family of languages, remains unaltered in its essential elements. These constantly produce new forms with modified meaning, and enrich the language with words and conceptions, but nothing whatever can be arbitrarily added to them.

The observation of these changes of form and meaning is a peculiarly delightful study, and opens a glimpse into the wondrous household of human language which is able to subsist on such simple means.

XIV.—CONSONANTAL CHANGE IN THE INDO-GERMANIC LANGUAGES.

Almost the entire consonantal structure of the Indo-Germanic languages is conditioned by the phonetic law discovered by Jacob Grimm.

This law of *sound-shifting* concerns the common roots or words of this family of languages, and explains the changes of sound gradually made in the mutes from tenues to aspirates, from aspirates to medials. It also explains the changes of sound in the guttural, dental, and labial groups of consonants in the various stages of language.

1. Sanskrit, Greek, Latin, Slavonic, Keltic.
2. Gothic, with Low German and English.
3. Old High German.

These rules are especially valid for consonants at the beginning of words, and in a far less degree for those in

the middle and at the end of words: they are thus expressed:—

1. Where there is a *tenuis*, *k*, *t*, *p*, in the first stage of development in language, its place is taken in the second stage by the corresponding aspirate or spirant, and in the third stage by the corresponding medial. The medial is however retained only in the dental class; compare Sec. 17, *τερο-*; in O. H. G. *h* and *f* were used instead of *g* and *b*.

2. Where aspirates, *χ*, *θ*, *φ*, occur in the first stage, their place is taken in the second stage by medials, *g*, *d*, *b*, and in the third by *tenuis*, *k*, *t*, *p*. Compare Sec. 24, *θήρ*, *θυγάτηρ*; Sec. 20, *ῥαγ*—*frag*. But instead of the *k* and *p*, which might be expected, *g* and *b* often remain in H. G.; compare Sec. 25, root *φν*; Sec. 23, *χν*; the dental *d*, on the contrary, becomes changeable into *t*.

3. When medials, *g*, *d*, *b*, occur in the first stage, the corresponding *tenuis* appear in the second stage, and aspirates in the third; compare *δάκρυ*, Sec. 21; *duco*, Gothic *tiuhan*, O. H. G. *ziohan*, H. G. *ziehen*; *z* = *ts*, the dental spirant for the dental aspirate.

This law undergoes modification through the want of strict aspirates in Latin, Sec. 11, 4, and Sec. 15, as well as to some extent also in Gothic and Old High German. The aspirates thus lacking are generally replaced by the corresponding breath-sounds or spirants.



XV.—CONSONANTAL RELATION BETWEEN GREEK AND
LATIN.

The consonantal differences between identical roots or words of these two languages, which are related, and stand on the same linguistic stage of development, are, in regard to their relation with each other, mainly conditioned by the following characteristic peculiarities:—

1. By the fact of the exchange of the guttural, labial, and dental tenses *k*, *p*, *t*, both in the transition from one language to the other, and within the boundaries of each of the two languages, Sec. 19.

With this is closely connected the development of the guttural tenuis *k* in Latin into the guttural tenuis with a labial secondary sound; that is to say into *qu* = *kv*, which often arises within the bounds of Latin from the fact that *c* = *k*. This *qu* is a transitional sound from the guttural to the labial tenuis, that is, from *k* to *p*, and explains the frequent interchange of *k* and *p* in Latin and Greek.

2. By the want of a proper aspirate in Latin, Sec. 11, 4. In the place of the Greek aspirates, *χ*, *θ*, *φ*, the corresponding breath-sounds are used in the beginning of a word, often *f*, or even the medial, for *χ* and *θ*. In the middle of a word *d* and *b* are found in the place of *θ*. For examples, Secs. 23—25.

3. By the tendency of the Greek language to dispense with spirants, and the entire absence of the spirant *j*,

which has only a latent effect, Sec. 11, 1. *J* is, on the contrary, very prevalent in Latin, both in the beginning and in the body of a word, as in the root *jug*, and in *ajo*, *major*. It often however becomes a vowel, and disappears both between vowels and after consonants, *cuncti* = *cojuncti*; *deicit* = *dejicit*; *obex*, *obicis* = *objex*, *objicis*; *minor* = *minjor*.

4. By the frequent transition of *s* in Greek into the rough breathing at the beginning of a word, though it may also pass into the smooth breathing, Secs. 11, 3; 30. On the other hand, *s* is changed into *r* between vowels, and at the end of a word in Latin, Sec. 11, 3. Compare H. G. *war*, *waren* = *was*, *wasen*; E. *was*, *were*; H. G. *küren* = *kiusen*; E. *choose*.

5. By the continuance of the old *vau*. This was a half-vowel, and as such was frequently weakened into vowels in the body of a word, as in the diphthongs *au* and *ou*, and disappeared altogether between vowels.

But it remained at the beginnings of words in Latin, Sec. 31, while it completely disappeared in the written language of Greece, or passed into the rough breathing, Secs. 11, 2; 31.

6. By the sporadic weakening of *d* in Latin to *l*: *δάκρυ*—*lacrima*; *lingua* = *dingua*, Gothic *tuggo*, H. G. *zunge*, E. *tongue*; *Ὀδυσσεύς*—*Ulysses*; *δαήρ*—*levir*; *olor*—*odor*, *ὄδωδα*; *silva* = *ĩδη*; compare conversely *adepts*—*ἀλείφω*; for the change of *β* and *g*, *β* and *v*, *β* and *f*, see Sec. 22.

7. By the different law in regard to the endings of words in the two languages. Compare for example *lact* = *λακτ* and *γάλα* = *γαλακτ*, Sec. 35.

In the following chapters the consonants are arranged as the elements of Greek and Latin roots and words, which partly remain unchanged, and partly change in the passage from one realm of language to another, according to known laws. A survey is made of the roots and stems common to two or more Indo-Germanic languages, according to the classes of consonants arranged on the basis of Greek. This is the etymological part of linguistic analysis.

THE CONSONANTS AS ROOT CONSONANTS.

A. MUTES.

I. TENUES. K. T. II.

XVI. THE GUTTURAL TENUIS K, corresponding to Latin *c*, *q*, *g*, Gothic, H. G. and E. *h*.

ἀκ—ἀκή, ἀκαχμένος, προήκης, εὐήκης, νεηκής, Doric νεακής, τανυήκης, πυριήκης, ἀκωκή, ἀκμή, ἀκόνη, ἄκρος, ἄκρις and ὄκρις, ὀξύς, ὠκύν; *acus*, *acuo*, *acies*, *acer*, *ocior*.

ἀρκ—ἄλκ—ἀρκέω, ἄρκιος, ἀρήγω, Sec. 9, 4; ἄλκή, ἀλαλκεῖν, ἀλέξω; *arceo*, *arx*, *arca*, *Herculus*, originally god of *hurdles* or *sheep-folds*.

εἴκοσι = *ἑικοσι* = *δῑκοσι*, Æolic *ῑκατι*; *viginti*, Sec.

2.

ἑκατόν, *centum*; Gothic *huna*; E. *hundred*.

ἑκ—έκών, άέκων—άκων, έκτητι, άέκτητι, έκηλος, εύκηλος, *invitus* = *invic(i)tus*?

έκ υ ρ ό ς, *socer*; Gothic *swaihra*, Greek rough breathing for σϕ, as ε, *φέ* = σϕε, *sve*, thence *se*.

ικ—ἱκ—έοικα, έίκτην, ήικτο, έίκε (from a present έίκω?)
 Il. XVIII. 520, έίσκω causative, είκάζω; ήκελος, έίκελος, έπιείκελος, άϊκώς Il. XXII. 336, άεικής, μενοεικής, άικέλιος, είκών.

ἱκ—ικω, ικάνω, ικνέομαι, ικέτης, ικτήρ, ικετήσιος, προίκτης, προίσσομαι (on the other hand see below προῖξ), ικανός, ικμενος.

κα θ α ρ ό ς, καθαίρω; *castus* = *cadtus*.

κα ί with locative ι, *que* see below τε. Sec. 19, 3.

κα λ—καλέω, κλήσις etc.; *calare*, *kalendae*, *nomenclator*, *classis*, *clamare*.

κα π—κώπη; *capio*, *capulum*; H. G. and E. *haft*, *heft*.

κα π—καπύω, κεκαφηώς, καπνός.

κά π η λ ο ς, *caupo*; H. G. *kaufen*, without any shifting of sound at the commencement, which proves that the word is strange to the language.

κά ρ α, κάρη etc., κρήνη; *cerebrum*; H. G. *hirn*.

κα ρ δ—κῆρ, κέαρ, καρδιά, κραδίη; *cor* (*cord*), *cordatus*, *vecors*; Gothic *hairto*; H. G. *herz*; E. *heart*.

κα υ—καϕ—έκηα, καήμεναι, έκαυσα, καίω, καῦμα, κήλον = κᾶλον, κήλεος, κήλειος Il. XV. 744, κηώδης, κάγκανος, reduplicated and with a nasal sound, Il. XXI. 364.

κε λ—κέλης, κελητίζω Il. XV. 679; *celer*, *Celeres*; κέλλω Sec. 19.

κε φ α λ ή; *caput*, *capillus*; Gothic *haubith*; H. G. *haupt*, E. *head*.

κ ι—κει—κείμαι, κέεται, κέατο, κοίτη, κοιμάω, κῶμος, κώμη;
quies, quiesco, civis; H. G. *heim*; E. *home*.

κ ι—κίω, κιών, μετεκίαθον, κινέω; *cio, cieo, citus*.

κ λ α—κλάω, κλάδος, κλῆρος.

κ λ ι—κλίνω, κλίμα, κλῖμαξ, κλιτύς; *inclino*, etc., *clivus*.

κ λ υ—κλύω, κλυτός, κλέος = κλέφος, κλέομαι, ἔκλεο II.

XXIV. 202; *cluo, inclutus, cliens, gloria = closia* (?);
H. G. *hlut, laut*; E. *loud*.

κ λ υ—κλύζω, κλύδων; *clueo, cluo, cloaca, fossa Cluilia*;
H. G. *hlutar, lauter*.

κ ο λ—κολούω, κόλος; *incolumis*.

κ ο π—κόπτω, κόπος; *fatigue = striking down, κωφός*;
Gothic *haunjan*; H. G. praeterite *hieb*, E. *heav*.

κ ο σ—κόσμος, κοσμέω; *como = cosmo, comptus*.

κ ρ ι—κρίνω; *cerno, certus, crimen*.

κ υ π—κύπτω, κύπη, κύπελλον, κύμβαχος = *head-foremost*, and *the crown of a helmet*; *cuḡa, —cumbo, cubare*;
H. G. *kufe*; E. *coif*.

κ υ ρ—κῦρος, κύριος, κυρόω, κουρίδιος, κουριδίη ἄλοχος =
housewife, not from κούρη, κόρη.

κ υ ρ τ ο ς, *curvus*.

κ ύ ω ν, *canis*; Gothic *hunds*; E. *hound*.

λ α κ—ἔλακον, λάσκω; *loquor, Locutius*.

λ α κ—λάκος, λακερός; *lacer, lacero, lacuna*.

ο ἴ κ ο ς, φοικ, φυκ, see above; *vicus*; E. *wick = a village*.

σ κ ε π—σκέπτομαι, σκοπή, σκοπός; *spec—specio—spicio, specula, species, suspicio*—from *suspēcio*, as *subtilis* from *tela*, *convīcium = convōcium*, not = *suspicio*. In Greek there is a metathesis between *p* and *c*; the Latin root-form is the original.

κ is weakened into γ; ἐφράγην from φράσσω = φρακῶ, ἐπλάγην from πλήσσω = πληκῶ.

XVII. THE DENTAL TENUIS T, Latin *t*, Gothic *th*,
H. G. *d*, and E. *t*, *th*, *d*.

σ τ α—στυ—ἵστην, ἵστημι = σιστημι, εἰσθήκειν = ἔσεσθαι, στάσις, ἰστός; ἐπίσταμαι = ἐπι-σταμαι without reduplication, for the meaning compare the H. G. *ver-stân*, *verstehen*; στεῦνται; formations from the extended stem σταθ—σταθμός, στάθμη, etc.; *sto*, *sisto*, *status*, *statio*, *stamen*, *stabulum*, *stabilis*, *vestibulum* = the outstanding place, forecourt; *s* disappears in *tabula*, *st* in *locus*, anciently *stlocus* from the extended root *stal*, *stla* Sec. 37 = *stlocus*; compare *lis*, originally *stlis* = *stlits*, O. H. G. *strit*, Sec. 29, 3; H. G. *stân*, *stelle*, *stuhl*; E. *stool*, *stand*.

σ τ ε π—στέφω, στέμμα, στέφανος; *stipare*, *stipator*, *stipulari*.

σ τ ι γ—στίζω = στιγῶ, στίγμα, στιγμή; *distinguo*, *instigare*, *stimulus*, *stilus*; H. G. *stich*; E. *stick*, *stitch*.

σ τ ο ρ—*stra*, *ster*, στόρνυμι, στορέννυμι, στρώννυμι, στρώμα, στρατός; ἀστήρ, Sec. 9, 5; *sterno*, *stratus*, *stramen*, *stella* = *sterula*, H. G. *stern*; *strages*, *struo*, *strues*; H. G. *strô*; E. *star*, *strew*, *straw*.

τ α—ταν—τεν—τῇ, τάσις, τάνυμαι, τανύω, τιταίνω, τείνω, τόνος; ταναός, ταναύποδες Sec. 9, 1, α, τανηλεγής; ἐπίτηδες, ἐπιτήδειος, *tendo*, *teneo*, *tenus*, *protinus*, *tonare*, *tonitru*; H. G. *donar*, *donner*; E. *thunder*.

τ α γ—τεταγών Homeric; *tango*, *contāgio*, *contāmen*, *contāminare*.

τ α κ—τήκω; *tā-bes, tabesco.*

τ α λ — τλα — *tol* — τλήναι, τάλας, ἐτάλασα, τάλαντον, ταλαύρινος, τολμάω; *tuli*, anciently *tetuli*, *lātus*, from *tlatus* = τλητός, *tollo, tolero.*

τ α φ—ἔταφον, τάφος; variation of the root in θαπ—τέθηπα, nasalized into θάμβος, θαμβέω.

τ έ γ γ ω, *tingo, tinguo.*

τ ε κ—ἔτεκον, τέκνον, τόκος, τέχνη; τυκ—τυχ—τετυκεῖν, τετύκοντο, ἔτυχον, τύχη, τυγχάνω, τεύχω; *tignum, tēlum = teclum, texo, tēla = texla* (compare *āla—axilla, mala—maxilla, vēlum—vexillum*), *subtēmen, subtilis = subtelis*, Sec. 16.

τ ε μ—ταμ—τμα—τέμνω, ἔταμον, τμήγω; simple form of the present without consonantal suffix, τέμει, Il. XIII. 707; to this also certainly belongs τετμεῖν = τετεμειν, ἔτετμε, *to hit*, in spite of the difference of meaning: τομή, τμήμα, ταμίας.

τ ε ρ—τέρην, τείρω, τέρετρον, τιτραίνω, τρανής; *tero, teres, terebra*; E. *drill, thrill.*

τ ε ρ σ—τέρσομαι, τερσαίνω, ταρσός; τάριχος, ταριχεύω; *torreo*; Gothic *thaurstei = durst*; O. H. G. *darru*, H. G. *dörre*; E. *thirst.*

totus, Gothic *thiuda, people, thiudisko*; H. G. *diot, diutisk, popular*, thence *deutsch*; E. *diet, a public assembly.*

XVIII. THE LABIAL TENUIS II, Latin *p*; for this H. G. and E. have *f* in the beginning of a word.

ἐ λ π—φελπ—ἔλπομαι, ἔολπα = φεφολπα, ἐλπís; allied to

this, ἔλδ, φελδ in ἔλδομαι, ἐέλδωρ, ἔλδωρ, δ for π; *volupis* archaic, *voluptas*.

ἔρπω, *serpo*; *rēpo* from *srepo* by metathesis

λιπ—λίπα, λίπος, λιπαρός, λιπαρής, λιπαρέω, ἀλείφω, ἄλειφαρ, ἄλειφα; *adepts*, an unusual transition, λ into δ, and on the contrary δ is weakened into λ in δάκρυ, *lacruma*, Sec. 15, 6, Sec. 21.

πα—πατ *to nourish*—ποτ—πατέομαι, ἐπασάμην, ἅσαστος, πάομαι *to acquire*, πέπαμαι, ἐπασάμην, πατήρ; πόσις = ποτις, *the lord of the house, the husband*, δεσπότης, πότνια, πότνα; *pater, Juppiter, pasco, pascor* inceptive, *pastor, panis, penus, penates*; *compos, potis, potens, possum, potior*; Gothic *fadar*; O. H. G. *fatar*; E. *father*.

παγ—πακ—ἐπάγην, πήγνυμι, πάγος, πάχνη, πηγυλῖς, Od. XIV. 476, πάσσαλος = πακῆαλος, πακτώω; *paciscor, pango, pax, pignus, pinguis, pachys*; E. *fat*.

παθ—πα—παθεῖν, πάσχω = παθσκω, οἱ = πασκω? παθ a further extension of the root πα, compare πῆμα; *patior*.

πεδ—πέδον, πεδίον, ποῦς st. ποδ, *pes* st. *ped*, ἔμπεδον = *oppido, oppidum*; H. G. *fuoꝝ, fuss*; E. *foot*.

πεν—πένομαι, πένης, πениχρός, πενία, πενέσται, πόνος, πείνα, πεινάω; *pēnuria*; compare σπαν—in σπάνις, σπανίζω, Sec. 30.

περ—περάω, *to press through*, πόρος, πείρα, πειράω, διαπρύσιος; *porta, portus, experior, peritus, periculum*; Gothic *faran*; H. G. *erfahrung, gefahr, wohlfahrt*, compare εὐπορία; περ in περάω, *to bring over*, is certainly identical; πέρνημι, πιπράσκω (πρα), πρίαμαι = πιπραμαι (?) *to bring to oneself, to buy*.

πετ—πτα—πέτομαι, ἐπτόμην, ἔπτατο, ἔπτην, etc., εὐπετής,

ὠκυπέτης, ἰθυπτίων Il. XXI. 169, a later and kindred form ἵπταμαι = πιπτ.; πεσεῖν, Dor. ἔπετον, διπετής, πίπτω = πιπετω, πιτνέω, πτώμα, πτώσις, πότμος; πεπτηώς see πτακ, *peto*, *impetus*, *penna* = *petna*, *præpes*—*pets*, on the other hand *bipennis* = *bipinnis* from *pinna* = *pitna*, a *pin-nacle*, compare πίτυς, Sec. 19, 3; H. G. *fedara*, *feder*, *fittig*; E. *feather*.

πετάννυμι, πίννημι, Sec. 8, 1, πέτασος, πέταλον; *pateo*, *patulus*, *patina*.

πεύκη, *pinus*; H. G. *fiuhta*, *fichte*, Sec. 19, 3, πικ—πιτ.

πι—πο—πίνω, πέπωκα, πόσις, πότος, πῶμα; *ῥōtus*, *ῥōtare*, *ῥōtio*, *ῥōculum*; *bibo* weakened and reduplicated.

πιθ—πεπιθεῖν, πείθω, πέποιθα; πίστις = πιθτις, πιθανός, πίσυνος, πειθῶ; *fides*, *Fidius*, *foedus*, Sec. 8, 2.

πίλος, *pilus*, *pileus*; H. G. *filz*, E. *felt*.

πίων, πιαρός, πείρα, πῖαρ, πιμέλη, πιαίνω; *or̥imus*.

πλα—πλέος, πλείος, πλέως, πίμπλημι, πλήθω; πλήθος, πληθύς, πλήρης; *pleo*, *plenus*, *plerusque*, *locuples*, *plebes*, *ῥōpulus*, *publicus*, *Publicola*, *plus*, *plurimus*.

πλακ—weakened πλαγ, reduced to πλα—; πλήσσω = πληκῶ, ἐπλάγην, πληγή, πλάζω = πλαγῶ *I strike off from the path*, *τειχεσιπλήτης*, *δασπλήτης* *torch-swinging*, Od. XV. 234; πελ is interchanged with this in πέλας, connected with πλησίον, πελάζω; πέλαγος *the sea laid flat* (?); *plango*, *plaga*, *plecto*; E. *flat*.

πλν—πλέω = πλεῖω, πλεύω Æolic Sec. 9, 1, πλεύσομαι, πλόος, πλοῦς, πλοῖον; πλώω = πλοῖω, ἔπλων, ἐπιπλῶς; πλύνω; *pluit*, *pluvia*; O. H. G. *fliozan*, *fluot*; E. *float*.

πνν—πνέω = πνεῖω, πνεύσομαι, πέπνυμαι, ἄμπνυτο, pres. form, ἄμπνυε Il. XXII. 222, πνεῦμα, πινυτός, πινύσσω

to make prudent, II. XIV. 249, ποιπνύω, with diphthongal, reduplication.

προῖξ, προῖκα, προῖκτης, προῖσσομαι, see Sec. 16, *fik*; *prex*, *precor*, *proco*, *procus*, *procax*.

πτακ—πτα—ἔπτακον, πτήσσω = πτηκῶ, καταπτήτην II. VIII. 136, πεπτηώς, ποτιπεπτηυῖαι Od. XIII. 98, παπταίνω, πτώξ, πτώσσω, πτωσκάζω.

πτέρνα, Gothic *fairzna*; H. G. *ferse*.

πτύω—*spuo*, *pituita*, *s* has disappeared at the beginning of the word as in Greek; H. G. *spihan*, *speien*; E. *spew*, *spit*.

πυ—πύθω, πύον = *pūs*; *puteo*, *putidus*; H. G. *faul*; E. *foul*.

πυκ—πύξ, πύκτης, πυγμή; *pugnus*, *pugil*, *pungo*, *pugno*. *pugio*; O. H. G. *fûst*; E. *fist*.

XIX. CHANGE OF THE GUTTURAL, LABIAL, AND DENTAL TENUIS, K, Π, T, in Greek and Latin.

1. Greek κ in the middle of a word = Latin *p*:

σκεπ—*spec* by metathesis, see Sec. 16.

σκῦλον, σκυλάω, σκυλεύω—*spolium*, *spoliare*, on the other hand σκῦτος—*scutum*.

σακ—*sap*—σηκός, Doric σακός; *sæpes*, *sæpio*, *praesæpe*, *sæpelio*.

λύκος, *lupus*; Gothic *vulfs*; E. *wolf*.

ὀκ—ὄσσε = ὀκῆ, ὄσσομαι = ὀκῶμαι, προτιόσσετο Od. XIV. 219; *opinor*, *inopinus*, *opinio*, see below ὀπ.

Greek κ at the beginning of a word = Latin *p*:

κέλλω, ὀκέλλω; *pello*, *appello*, connected with *procella*.

2. The Greek π is still more common for the original k , Latin c , q :

$\epsilon\pi$ — φεπ — $\epsilon\pi\sigma$, $\epsilon\iota\pi\sigma$, $\epsilon\epsilon\iota\pi\sigma$ = $\epsilon\text{φεφεπ}\sigma$, $\omicron\psi$ stem $\omicron\pi$, $\epsilon\nu\omicron\pi\eta$, $\epsilon\upsilon\rho\upsilon\omicron\pi\alpha$, *far-sounding*; *vec* in *vox* stem $\nu\omicron c$, *voco*, *invito* = *invicito* from *vec* = φεπ , *convicium* by assimilation of vowels from *convocium*; so too the Greek κ in $\omicron\sigma\sigma\alpha$ = $\omicron\kappa\jmath\alpha$; $\iota\sigma\kappa\epsilon\nu$, *he spake*, Homeric, Od. XXII. 31, = $\sigma\iota\sigma\epsilon\kappa\epsilon\nu$ from $\sigma\epsilon\kappa$ = $\sigma\epsilon\pi$ = φεπ , compare $\epsilon\nu\nu\epsilon\pi\epsilon$ = $\epsilon\nu\sigma\epsilon\pi\epsilon$, $\epsilon\iota\sigma\epsilon\tau\epsilon$ = $\sigma\epsilon\sigma\epsilon\tau\epsilon$, $\epsilon\nu\iota\sigma\pi\epsilon\varsigma$, $\epsilon\nu\iota\sigma\pi\epsilon$, $\epsilon\nu\iota\sigma\pi\eta\sigma\omega$, $\epsilon\nu\iota\sigma\pi\epsilon\iota\nu$, $\theta\acute{\epsilon}\sigma\pi\iota\varsigma$, $\theta\epsilon\sigma\pi\acute{\epsilon}\sigma\iota\omicron\varsigma$; $\epsilon\chi$ — $\sigma\epsilon\chi$ in $\epsilon\chi\omega$, $\iota\sigma\chi\omega$, $\epsilon\sigma\chi\omicron\nu$, $\sigma\chi\acute{\epsilon}\varsigma$, is analogous to this variation of roots $\epsilon\pi$ — $\sigma\epsilon\pi$.

$\epsilon\pi$ — $\sigma\epsilon\pi$ — $\epsilon\pi\omega$, $\epsilon\pi\omicron\mu\alpha\iota$ = $\sigma\epsilon\pi\omicron\mu\alpha\iota$, $\epsilon\sigma\pi\omicron\nu$, $\epsilon\sigma\pi\acute{\omicron}\mu\eta\nu$ = $\sigma\epsilon\sigma\epsilon\pi\acute{\omicron}\mu\eta\nu$, $\acute{\epsilon}\alpha\phi\theta\eta$ (?) Il. XIII. 543; XIV. 419,—with syllabic augm. on account of the original σ at the beginning of a word, α instead of ϵ as $\acute{\epsilon}\tau\alpha\rho\phi\theta\eta\nu$ from $\tau\acute{\epsilon}\rho\pi\omicron\mu\alpha\iota$, $\omicron\pi\lambda\omicron\nu$; *sequor*, *secus*, *secundus*, *socius*; so too the Greek κ in Homeric $\acute{\alpha}\omicron\omicron\sigma\sigma\eta\tau\eta\rho$ = $\acute{\alpha}\sigma\omicron\kappa\jmath\eta\tau\eta\rho$, compare *as-sec-la*.

$\eta\pi\alpha\rho$, *jecur*, see Sec. 6, 3.

$\iota\pi$ — $\iota\pi\omicron\mu\alpha\iota$, $\epsilon\nu\iota\pi\tau\omega$, $\eta\nu\iota\pi\alpha\pi\epsilon$, $\epsilon\nu\iota\pi\eta$, $\epsilon\nu\epsilon\pi\iota\pi\tau\epsilon$ Il. XV. 552; *ico*; so too the Greek κ in $\epsilon\nu\iota\sigma\sigma\omega$ = $\epsilon\nu\iota\kappa\jmath\omega$; $\iota\acute{\alpha}\pi\tau\omega$, *jacio*, see Sec. 32, 4.

$\iota\pi\omicron\sigma$, $\iota\kappa\kappa\omicron\varsigma$; *equus*, Sec. 6, 3, connected with *Eῤῥῶνα* Juven. VIII. 157.

$\lambda\iota\pi$ —*lic*— $\lambda\iota\pi\epsilon\iota\nu$, $\lambda\acute{\epsilon}\iota\pi\omega$, $\lambda\omicron\iota\pi\acute{\omicron}\varsigma$; *linguo*, *reliquus* (*lic*), *licet*.

$\omicron\pi$ — $\omicron\psi$, $\omicron\pi\omega\pi\alpha$, $\omicron\pi\omega\pi\eta$, $\omicron\pi\iota\varsigma$, $\omicron\mu\mu\alpha$ = $\omicron\pi\mu\alpha$, $\omicron\pi\tau\eta\rho$, $\omicron\psi\omicron\mu\alpha\iota$, $\omicron\psi\epsilon\iota\omega$, desiderative, Il. XIV. 37, $\omicron\phi\theta\alpha\lambda\mu\acute{\omicron}\varsigma$, $\epsilon\nu\omega\pi\eta$, $\epsilon\nu\omega\pi\alpha$ Il. XV. 320, $\epsilon\iota\sigma\omega\pi\acute{\omicron}\varsigma$ Il. XV. 653, $\upsilon\pi\omega\pi\iota\alpha$, $\omicron\pi\iota\pi\epsilon\upsilon\omega$ reduplicated, $\pi\alpha\rho\theta\epsilon\nu\omicron\pi\iota\pi\alpha$ Il. XI. 385; *oculus*; so too the Greek κ in $\omicron\sigma\sigma\epsilon$, $\omicron\sigma\sigma\omicron\mu\alpha\iota$; Latin p in *opinor*.

$\pi\acute{\epsilon}\nu\tau\epsilon$, Æolic $\pi\acute{\epsilon}\mu\pi\epsilon$, $\pi\epsilon\mu\pi\tau\acute{\omicron}\varsigma$, $\pi\epsilon\mu\pi\acute{\alpha}\zeta\omega$; the Oscan ad-

verb of time *pompis*, compare the Sabine *Pompilius*, *quinque*; Gothic *fiṃf*; E. *five*.

πεπ—πέπτω, πέψω, πέπων; ὀπτάω, ὀπτός = ποπτος, ὄψον; connected with πεκ in πέσσω = πεκῶ; *coquo*, *cocus*, *coquina*; connected with doubled *p* in *pora*, *porina*, *poranum*, πόπανον, *pastry*.

πο—relative and interrogative pronominal-stem whence που, ποθι, πως, πω, ποτε, ποθεν; Ionic κου, κως, κοτε, κόσος, κότερος; Latin stem *quo—cu—*; *quod*, *quid* Oscan *pid*, *ubi* = *quobi*, enclitic—*cubi* in *alicubi*, *sicubi*, *necubi*; *necunde*, *quantus*, *uter* = *quoter*, *neuter* = *ne-cuter*, *alicunde*; Oscan stem *po —*.

τρεπ—τρέπω; *torqueo* by metathesis; so too the Greek κ is retained in ἀτρεκέως, ἀτρεκές, perhaps also in τρώκτης a sharper, not *greedy*, as if from τρώγω; Od. XIV. 289; *tricae*, *trico*, *intricare*, *extricare*.

3. τ = π and stands for the original *k*:

ἀταλός = ἀπαλός; πέντε, *quinque*; πόκα, ὄκα, Doric = πότε, ὄτε; τε = *que*, see above καί Sec. 16, compare ἥττων, ἥκιστα, ἥσσω = ἥκῃ.

πιτ—πικ—πίτυς, πεύκη, πίσσα = πιτῆ or πικῆ, πικρός, πευκάλιμος, πευκεδανός, ἔχεπευκῆς; *pinus*, *pix* stem *pic*; H. G. *fuhta*, *fichte*; *pech* without shifting of sound, a foreign word.

4. The change of *k* to π, *p*, and from π, *p* to τ takes place in:

quattuor, Skr. *chatur*—πίσυρες Homeric, πέσσυρες Æolic, πέτταρες Boeotian, Attic τέτταρες, τέσσαρες = τεσφ. = τετφ.

quinque—πέμπε Æolic, πέντε, see above.

quis stem *ki*,—*pis*, Neuter *pid*, Oscan and Umbrian,—*tis*.

2. MEDIALS. Γ. Δ. Β.

XX. THE GUTTURAL MEDIAL Γ, corresponding to the Latin *g*, Gothic *k*, English *k*.

ἀγ—ἄγω, ἀγαγεῖν, ἀγός, ἀγινέω, ἡγέσθαι ; *ago, cōgo, coago, cōgito, coagito, agmen, exāmen* Sec. 9, 2, *exiguus*.

ἀγ—ἄγ—ἄγος, Ion. ἄγος, ἄγιος, ἄζομαι = ἀγῶμαι, ἐναγής ; ἄγαμαι see below.

φαγ—ἄγνυμι, ἀγή, ἔαγα = φαγα, Ion. ἔηγα, ἐάγην, ἀκτή, ἰωγή Od. XIV. 533 = φῑγωγή with reduplication, compare ἰωή = ἰωῖη from ἀφ, Sec. 31, κυματωγή.

ἀργ—ἀργός, ἀργής, ἀργενός, ἄργυρος, ἀργίλος ; *arguo, argutus, argentum, argilla*.

γα—γαφ—γαν—γαίω, βουγαίε vocative Il. XIII. 824, γάνυμαι, γανάω, γάνος, γηθέω, γέγηθα ; *gaudeo, gavisus*. Related to this is the stem ἀγα in ἄγαμαι, ἀγάομαι, ἀγαίομαι, ἀγητός, ἄγη, ἄγαν, ἀγανός, ἀγανός, ἀγαυρός.

γαρ—γῆρυσ, γηρύω ; *garrio, garrulus*.

γεν—γνα—γα—γένος, γίγ(ε)νομαι, γνήσιος, γεγαώς, νηγάτεος, γυνή ; *genus, gig(e)no, gnascor, natura* ; Gothic *kuni* ; O. H. G. *chunni, chunning*, H. G. *könig* ; E. *king*, originally = *father*, O. H. G. *chind*, H. G. *kind* = γόνος ; E. *kin*.

γένυς, γένειον, γνάθος ; *gena* ; Gothic *kinnus* ; H. G. *kinn* ; E. *chin*.

γευ—γεύομαι ; *gusto, gustus* ; Gothic *kiusan, kustus* ; O. H. G. *chiusu, chust* ; H. G. *kiese, küse, koste*.

γνο—originally *gna*—ἔγνω, γιγνώσκω, ὄνομα = ὀγνομα, γνῶσις, γνώμη, γνώμων ; *gnosco, gnarus, ignoro*, archaic *gnarigare, narrare, nobilis* ; *agnitus, cognitus* with weaken-

ing of the vowel, *nōtus*, *ignōtus*, *gnārus* with strengthening of the vowel ; Gothic *kannjan*, *kunths*, *kunthi* ; E. *ken*.

γονυ, γνύξ, πρόχυν, γουνάζομαι, γουνός, ἰγνύη, Sec. 9, 5 ; *genu* ; Gothic *kniu* ; E. *knee*.

ἐργ—*Feργ*—*Freγ*—*ἔργον*, *ἔοργα* = *FeForγα*, *ἐώργει* Od. XIV. 289 = *είοργει* from *έFeF*. ; *ἔρδω* = *Feργῶ*, for *ἐρζω*, *ῥέζω* = *Freγῶ*, *ἀργός* from *ἀεργός* ; Gothic *vaurkjan* ; H. G. *werk* ; E. *work*.

Feργ—*εἶργω*, *ἐέργω*, *ἔρχαται*, *ἐέρχεται*, *ἐρχατόωντο* Od. XIV. 15 ; *urgeo*.

ζυγ—*jug* see Sec. 32, 1.

λυγ—*λυγρός*, *λευγαλέος*, *λοιγός* ; *lūgeo*, *luctus*.

ῥαγ—*Fraγ*—*ῥήγνυμι*, *ῥηγμίν*, *ῥωγαλέος* ; *ῥακ*—in *ῥήσσω*, *ἐπιρρήσσω* ; *frag*—*frango*, *fragilis* ; Gothic *brikan* ; O. H. G. *prichan* ; E. *break*.

ῥεγ—*ὀρέγω*, *ὀργυιά* ; *rego*, *rex*, *rectus*, *erga*, *ex rega*, in the direction ; H. G. *recken*, *richten*.

στεγ—*τεγ*—*στέγω*, *τέγος* ; *tego* ; O. H. G. *dak* —, H. G. *dach*, *decke* ; E. *deck*, *thatch*.

XXI. THE DENTAL MEDIAL Δ, corresponding to the Latin *d*, Gothic and Low German *t*, German *z*, English *t*.

ιδ—*fad*—*svad*—*ἔαδον* = *FeFadon*, *εὔαδον* = *έFadon*, *ἔαδα*, *ἀνδάνω*, *ἔεδνον*—*σφεδνον*, *ἐδανός* Il. XIV. 172, *ἦδος*—from which the rough breathing has disappeared, compare below *ἴδος*—*ἄσμενος*, a participle become an adjective, like *ἱκμενος*, *ἦδονή*, *ἦδομαι*, *ἦδύς*, *ἦδυμος* = *νήδυμος* (?) ; *suavis* = *svadvis*, *suadeo*.

ἄρδ—*ῥαδ*—*ἄρδω*, Homeric *ἐρράδαται* with the radical *δ*,

compare ἐρηρέδαται, νεαρδής, ραίνω = ραδνῶ. Instead of the medial the aspirate appears in ραθάμιγξ, ραθαίνω, ραθάσσω.

δα—δέδαε, δαῖναι, δαήμων, ἀδαήμων, δαίδαλος, δαιδάλλω, with diphthongal reduplication, δαίφρων *prudent*, Odys. ; root δακ in διδάσκω = διδαχ-σκω, διδαχή, compare *dic* in *disco* = *dic* *sco*, *doceo*, see below δικ.

δα—δαίω, *I divide*, ἐδασάμην, δαίς, δαΐζω, δατέομαι, δασμός, δαιτρός.

δα f—δαιω, *I kindle*, δάηται Il. XX. 316, δέδηα, θεσπιδαής, δασπλήτης see above πλακ—πλα Sec. 18, δαίς, apocop. dat. δαί, δαλός, δανός Od. XV. 322, δαίφρων Il. *warlike* ; δήιος, δηιώω, δηιότης, δηλέομαι ; *deleo*.

δά κ ρ υ, *lacruma* see Sec. 15, 6 ; Gothic *tagr* ; O. H. G. *zahar* ; E. *tear*.

δα μ—δαμῆναι, δαμάω, δαμάζω, δάμνημι, δάμαρ, ἀδμής, δμώς ; *domare*, *dominus*, *dominari* ; H. G. *zahm* ; E. *tame*.

δέ κ α, *decem* ; Gothic *taihun* ; O. H. G. *zehan* ; E. *ten*.

δε μ—δέμω, δέμας, δόμος, δῶμα ; *domus* ; Gothic *timrjan* ; H. G. *zimmer* ; E. *timber*.

δη = *jam* = *dja-m*, compare *Janus*, *Diana*.

δι—stem διε in δίεμαι Il. XXIII. 475, ἐνδίεσαν XVIII. 584, δίωνται XVII. 110, δίοιτο Od. XVII. 317 ; perf. δέδια, δείδια ; pres. δείδω = δειδιω, thence δέδοικα, δειδίσσομαι.

δι f — *div*, *dju* — = *light*, *God*, *heaven*, *day* : διος, ἔνδιος, εὐδιος, διυπετής ; Ζεύς = Δῖευσ, Διός, Διώνη, kindred form with nasal suffix Ζήν, Ζηνός, acc. Ζήν Il. XIV. 265, from the stem *dja*, as in *Janus* ; δηλος, δέελος, δέατο Od.

VI. 242, δοάσσατο, stem *dev* ; *deus, divus, divinus, Dius fidius, Dialis, Juppiter = Djuppiter*, the vowel being weakened in consequence of the deeper sound of the second word in composition, *Jovis = Djovis, Diana = divana*, the heavenly one ; *Janus, Janus-pater ; dies, diu*, by day in *noctu diuque*, a day long, long time, *interdiu, diutius, diutinus*, stem *diuto*, *dum = dium* ; O. H. G. *Zio, Dienstag = Ziestag* ; E. *Tuesday*.

δικ—δίκη, δέικνυμι ; *dicio, condicio, dicis in dicis causa, indico, dico, causidicus, maledicus, judex = jusdecis ; disco = dicisco, doceo* see above *δα* ; Gothic *ga-teihan* ; H. G. *zihan, zeihen, zeigen*.

δο—δίδωμι, originally *da, dadāmi* ; *δοτήρ, δόσις, δῶρον* ; stem *da* in *do, dos, donum ; duim, duam* ; see below under Moods ; for the relation between *δο* and *θε = dha*, see Sec. 15, 2 A. ; Sec. 24, *θε = cēdo, give here*, compounded of the demonstrative *ce* and *do = da* ; *cette = ce-dite = date*.

δύο, δίς = *δφis ; duo, bis* as *bellum* from *duellum = dvis, dis* — ; Gothic *tvai* ; H. G. *zwei, zer*— ; E. *twain, two*.

εδ—ἔδω, ἔδμεναι, without tach-vowel, compare below *est, ἔδωδή, ἔδητύς, ἔσθω, ἔσθίω ; νῆστις, ὠμηστής ; edo, est = edt, esurio = edsurio, esca = edsca*.

εδ—σεδ—ἔδος, εἶσα = *ἔσεδσα, ἔσσαι, ἔσαι, ἑέσσατο = ἔσεδσ., ἔζομαι (ἔδj.), ἑδοῦμαι, ἔζω* with present reduplication = *ιἔδjω, ἔδρα ; sed—sedeo, sīdo = sisedo, sedes, sella (sedla) ; Gothic sitan, sitls ; O. H. G. sizan, sezal ; E. sit, settle*.

ιδ—ἴδ—ιδεῖν, εἶδον = *ἑφιδον = εἶδον, οἶδα, ἴδμεν, Ion. ἴσμεν, ἴστωρ, ἴδρις, ιδρεΐη, ἰνδάλλομαι, αἴστος, αἴστώ, Ἀΐδης, ἄδης, νῆις* Il. VII. 198, Od. VIII. 179 ; *video, visus, viso, vitrum*.

ιδ—ιδ—φιδ—σφιδ—ιδος, ιδίω, ἴδιον Od. XX. 204, ἰδρῶς, ἰδρώ; *sudo, sudor*; O. G. *sveiz*; E. *sweat*.

καδ—κέκαδον, nothing to do with χάζω, κήδω, κῆδος, κεδνός, active = *careful*, passive = *of value, dear*.

ὀδ—ὀδωδᾶ, ὄζω = ὀδῶ, ὀδμή; *odor, oleo, d* being weakened into *l*, see Sec. 15, 6.

ὀδοῦς, stem ὀδοντ with vowel prefixed, Sec. 9, 5; *dens*; Gothic *tunthus*; H. G. *zand, zahn*; E. *tooth*.

σκεδ—σκεδάννυμι, σκίδνῃμι, σκίδναμαι for the weak vowel see Sec. 8, 1; *scandula*.

σκιδ—σχίζ—σχίζω, σχίζα; *scindo, scidi*, anciently *scidi* see below simple Latin perfect, *scida*; root *cid*—*caedo, caementum, caespes*; O. H. G. *sceidan, sceit*, H. G. *scheit*; E. *skid*.

ὕδ—ud—vad—ὔδωρ; *unda*, Gothic *vato*; O. H. G. *wazar*; E. *water*.

XXII. THE LABIAL MEDIAL B.

In Greek β is seldom original, and then = Latin *b*; more often = an original *g*.

βα—βαίνω = βανῶ, βῆναι, βιβάς with pres.-reduplication, βάσκε, βιβάζω, βιβάσθων, βῆμα, βάδην, βέβαιος, βέβηλος; *betere, arbiter*; instead of *b, v* in *venio*; Gothic *qiman*; O. H. G. *koman, kommen*, points back to the original *g* in Sanskrit, root *gâ*, to go.

βους, Doric βῶς, βουγάιε, Sec. 20, γα; *bōs* stem *βου*; O. H. G. *chuo*, which points back to the original *g* in Sanskrit, *gaus*; E. *cow*.

β = *b* in βληχή, *balare*; βραχύς, *brēvis* = *bregvis*,

compare ἐλαχύς, *lēvis* = *legvis* Sec. 23; βάρβαρος, *balbus*.

β = Latin *g* in βάλανος, *glans*; βαρύς, *gravis*.

βι in βίος, βιόω = γφι, the γ disappears and the φ is hardened into β; Epic future without the characteristic tense-letter βέομαι, βείομαι, *vivam*, βέη Il. XVI. 852; *vivo* reduplicated verb = *gvigvo*, *vixi*, *vig-si*, with the guttural retained, *vīvus*, *vīta*, *victus*; H. G. *queck*, *quick* in *erquicken*, *quecksilber*; E. *the quick and dead*, *quickset-hedge*; Sanskrit root *jiv*.

β = original and Latin *v*:

βολ, βόλομαι Il. XI. 319, Od. I. 234, XVI. 387, βούλομαι, βουλή etc.; *volo*, *nolo* = *ne-volo*, *malo* = *magi-volo*, *voluntas*; *voluptas*, see Sec. 18, ἐλπ—; O. H. G. *wellan*, *willo*; E. *will*.

ἀμείβω, Doric ἀμέυω, ἀμοιβή; original root *miν* in *moveo*, *mōtus*, *mōmentum*, *mūto*.

β = φ = *f*: βασκαίνω, βάσκανος; *fascinare*, *fascinum*, from the root φα, *fa*, Sec. 25 = *fascination*.

3. ASPIRATES X. Θ. Φ.

XXIII. THE GUTTURAL ASPIRATE X, corresponding to the Latin *h*, *f*, *g*, in the beginning of a word *g*, Gothic *g*.

ἀκ—ἀγχ—ἄχος, ἄχομαι, ἀχέω, ἀχεύω, ἥκαχον, ἀκαχοίμην, ἀκάχησε, ἀκάχημαι, ἀκαχήμενος, ἀκηχέδαται, with change of quantity, ἀκαχείατο, ἀκαχήδατο, ἀκαχίζω, ἄχυνμαι, ἄχθομαι, ἄχθος, ἄγχι, ἄσπον = ἀγχῖον, ἐπασσύτερος; *ango*, *angor*, *angustus*, *anxius*; H. G. *angst*.

ἐλαχύς, ἐλάσσων, —χίων ; *lēvis* = *legvis*.

ἐχ—φεχ—ὄχος, ὀχέομαι, ὄχημα ; *veho*, *via* (*vea*), *vexo*, *vēlum* = *veglum*, *vexillum*, *vectis* ; H. G. *wagen*, *weg* ; E. *way*.

ἐχ—σεχ—ἔχω, ἔσχον = σεσεχον, σχεῖν, εἶχον = ἐσεχον, ἴσχω present reduplication = σισεχω ; further formation in σχέθω = σεχθω, ἰσχανάω, ἀσχαλάω ; ὄχα compare ὄχωκα = ὀκωχα, ἐχυρός, ὀχυρός, σχῆμα, σχεδόν, ἐπισχερώ, ἐξείης.

λιχ—λείχω, λιχμάω, λίνχος ; *lingo*, *ligurio* ; Gothic *bi-claigon*—; H. G. *lecken* ; E. *lick*.

στιχ—στίχος, στείχω, στοῖχος ; *vestigium*, *vestibulum* see στα—Sec. 17, *fa-stigium* ; Gothic and H. G. *steig*—, *steg* ; E. *step*.

χα—χαν—χαίνω, χάσκω, χάσμα ; καχάζω reduplicated, καγχαλάω reduplicated with nasal sound = *achinno* ; *hio*, *hisco*, *hiatus*, *hiulcus* ; *fatisco* (?) ; O. H. G. *kin—gin*—H. G. *gähnen* ; E. *gawn*.

χαδ—ἔχадон, χανδάνω, κεχανδότα Il. XXIII. 268, κεχάνδει XXIV. 192 ; *prehendo* = *prae-hendo*, *praeda* = *prae-hida*, *praedium* = *prae-hendum*, compare *prae-bere* = *prae-hibere*, *debere* = *de-hibere*.

χαδ—χάζω, κεκάδοντο Il. XV. 574 = ἐχάσαντο ; *cēdo*, *necesse*, *successus* from *ne-ced-tis*, *suc-ced-tus*.

χαμαί, feminine locative, χαμάdis, χαμάζε, χθαμαλός, χθών ; *humus*, *humī*, *humilis* ; *homo*, anciently *hemo*, *nēmo* = *ne-hemo* ; Gothic *guma* ; O. H. G. *komo*, H. G. *gam* in *bräutigam* ; E. *groom*.

χαρ—ἐχάρη, χήρατο Il. XIV. 270, χαίρω, χαρά, χάρις χαρίεις ; *gratus*, *gratia* ; O. H. G. *ger*, *giri*, *gerōn*.

χελιδών, *hirundo* ; compare χάλαζα, *grando*.

χερ—χείρ, χέρης, according to the meaning = ὑποχείριος, compare *mancipium*, χερείων, χείρων, εὐχερής, χράω *to attack*, ἐγχερίπτω; *herus, heres, herctum, hercisco*.

χῆν; *anser* for *hanser*; O. H. G. *kans*, H. G. *gans*; Bohemian *hus*; E. *goose*.

χῆρος, χήρα, χηρεύω, χωρίς, χαρίς, χατέω, χατίζω, χῆτος; *ad fatim, adequate, according to desire, fames, fatigo, fessus; fatisco* (?), see above χα.

χθές, ἐχθές; *heri* for *hesi*, compare *eram = esam*, Sec. 15, 4, *hesternus*; Gothic *gistra*; O. H. G. *kestre*, H. G. *gestern*; E. *yester*.

χι—χιών, χεῖμα, χειμών, χειμάζω; *hiems, hibernus*.

χολή; *fel = hel*; O. H. G. *kalla*, H. G. *galle*; E. *gall*.

χορδή, *chorda*, a foreign word in Latin; stem *haru*, the gut, in *haruspex, hariolus* connected with *fariolus*.

χόρτος; *hortus, cohors, a close army corps*; Gothic *gards*; O. H. G. *karto*, H. G. *garten*; E. *garden*.

hostis, also *foctis, hospes = hostipes*; Gothic *gasts*; O. H. G. *kast*, H. G. *gast*; E. *guest*.

χρ—χρίω, χρῖμα, χρῖσμα; *frio, frico, fricae, frivolus*.

χρυσός; Gothic *gulth*; O. H. G. *kold*, H. G. and E. *gold*.

χυ—χέω = χεῖω, Æolic χεύω, ἔχευα, ἔχεα = ἐχεῖα, ἐχύθην, χεύσω, χύμα, χεύμα, χοή, ἰοχέαιρα, χώομαι, compare ἄπλέω, πλώω = *confundor, to be troubled*; Latin stem *fud* in *fundo, fons, fūtis, fūtilis, confūto, refūto, effūtio*; Gothic *giutan*; O. H. G. *kiuzu*, H. G. *giesse, guss*; E. *gush*.



XXIV. THE DENTAL ASPIRATE Θ. On account of the want of a dental aspirate the Latin equivalent for this is often *f* in the beginning of a word, *d* and *b* in the body of it ; Gothic *d*, German *t*, English *d*.

αιθ, originally ιθ—αἶθω, αἶθων, αἰθήρ, αἶθοψ, Αἰθίοψ ; *aedes*, originally meaning a *fireplace*, *aestus* = *aedtus*, *aestas*.

ἐρυθρός, with ε prefixed, Sec. 9, 5 ; *ruber*, *rufus*, *robigo*, *ru-tilus* ; O. H. G. *rôt* ; E. *red*, *ruddy*.

θα—θῆσθαι Homeric = *to suckle*, θήσατο Il. XXIV. 58, θηλή, θῆλυς, γαλαθηνός, τιθήνη, τιθασός, τιθαιβώσσω Od. XIII. 106, ἀτιτάλλω ; *fēmina*, *filius*, *fētus*, *fēnus*, *fēcundus* (?) see below φυ.

θαυ—θνα—θανεῖν, θάνατος, θνήσκω, θνητός, τέθνηκα ; Gothic *dauthus* ; O. G. *tôd* ; E. *dead*.

θε — Skr. *dha* — τίθημι, θέω in προθέουσιν Il. I. 291, θέσις, θέμις etc. compare δο, Sec. 21 ; in the Latin root *da*, *to give*, and *dha* = θε, *to set*, have coalesced ; this last meaning is retained in *condo*, *abdo*, *trado*, etc. ; θ = *f* in *fāmulus*, *fāmilia*, certainly also *facio*, with the root extended by the addition of *c*, compare *jacio*, root ἐ ; O. H. G. *tuom*, a *judge's sentence*, *tât* ; E. *doom*.

θευ—θείνω ; *fendo* in *offendo*, *defendo*.

θερ—θέρω, θέρος, θερμός ; O. L. *formus*, *formucapes*, thence *forceps*, *fornus*, *furnus*, *fornax* ; Gothic *varmjān*, O. H. G. *waram*, H. G. and E. *warm*.

θήρ, φήρ, Æolic ; *ferus*, *fera*, *ferox* ; Gothic *dīus* ; O. H. G. *tior*, H. G. *tier* ; E. *deer*.

θυγ—θυγγάνω ; *tingo*, *figulus*, *figura*, *fictile*.

θρα—θαρ—θρασύς, θάρσος, θαρρῆν; E. *dare*; *fretus*, *fortis*.

θυ—θύω, θύελλα, θυμός, θῦμα, θύος, θυῆεις, θυόεις; *suf*-*fire*, *fumus*, *funus*, *burning incense for the dead*; Gothic *dauns*; O. H. G. *toum*, H. G. *dunst*. Compare Sec. 37.

θυγάτηρ; Gothic *dauhtar*; O. H. G. *tohtar*, H. G. *tochter*; E. *daughter*.

θύρα; *fores*, *foris*, *foras*, French *hors*; Gothic *dauro*; O. H. G. *turi*, H. G. *thor*, *thüre*; E. *door*.

οὔθαρ; *uber*; O. H. G. *ûtar*; E. *udder*.

πυθμήν; *fundus*; O. H. G. *bodam*, H. G. *Bodensee*; E. *bottom*.

XXV. THE LABIAL ASPIRATE Φ, corresponding to the Latin *f* = *bh*, in the middle of a word *b*, in German and English *b*.

ἄλφ—ἡλφον, ἄλφάνω, ἄλφηστής, ἄλφείβοιαι II. XVIII. 593; *labor* (*labos*), *laboro*; O. H. G. *arabeit*, H. G. *arbeit*.

ἄμφω; *ambo*; H. G. *beide*; E. *both*. ἀμφί, *amb—am—an*—in composition, *ambio*, *ambages*, *amplector*, *anquiro*.

ἄφενος, ἀφνειός; stem *op* in *ops*, φ in the middle of a word = *p*, *opulentus*, *vol-up-tas* (?)—see Sec. 22 βολ—*vol*, Sec. 18 ἔλπ, —*cōpia* = *coopia*; stem *ap* in *apiscor*, *aptus*, *coeṛi* = *coēpi* from the original *coapio*.

νέφος, νεφέλη; *nēbula*, *nēbulo*, *nūbes*, *nūbo*, but on the other hand, *pronūba*, *nubilus*, *nubila*, *nimbus*; O. H. G. *nebal*, H. G. *nebel*.

ὀμφαλός; *umbilicus*; O. H. G. *nabulo*, H. G. *nabel*; E. *navel*.

ὀρφανός; *orbus, orbare*; O. H. G. *arbja*, H. G. *erbe*.

ὀφρύς; O. H. G. *prâwa*, H. G. *braue*; E. *brow*.

φ α—φαF—φαν—φημί, φατός, φάσκω, φάτις, φήμη, ἀμφασίη, παράφασις, πάρφασις, παραίφασις, παλαίφατος, φωνή; φάε Od. XIV. 502, φάος, φῶς, φάεινος, φαεινός, φαέθω, φαεσίμβροτος, πιφαύσκω, παιφάσσω, *I flash*, Il. II. 450, φαίδιμος, φαιδρός; ἐφάνην, φανερός, φαίνω, πεφήσεται Il. XVII. 155, παμφαίνω with nasal reduplication, φάσμα; from φαF by hardening the digamma, giving a nasal sound, and changing the α into ε, comes φεγγ in φέγγος; φα is further formed into φαλ in φαληρός, Doric φαλαρός, φαληριόωντα Il. XIII. 799; *fari, fama, fanum, fatum, Bonifatius*, compare Εὐφήμιος, *fatuus, fas, fateor, fetialis, a speaker = herald, infitias (ire), infitiari, fabula, praefica, facundus, facetus*; *fax, facies*.

φ α—φεν—φατός, πέφαται, πέφανται, πεφάσθαι, πεφήσομαι, πρόσφατος, ὀδυνήφατος, ἀρηίφατος, μυλήφατος; ἔπεφνον, φόνος, φοίνιος, = φονj with epenthetic ι on account of the retention of it in the following syllable; O. H. G. *pano*, *a murderer*; (?) E. *bane*.

φ ερ, Skr. *bhar*,—φέρω, φέρτε without tach-vowel = *ferte*, φέρετρον, φαρέτρα, φόρος, φόρτος; *fero, ferculum, Feretrius, fertilis, ferax, fors, fortuna, fortuitus*; Gothic *bairan*; O. H. G. *piru* = *fero*, *purdi* = *bürde*; Gothic *gabaurths*; O. H. G. *bâra*, H. G. *bahre, bar*, in composition; E. *bear, birth*.

φ η γ ός, *fagus*; Gothic *bôka*; O. G. *pouchà*, H. G. *buche*; E. *beech*, Sec. 13, 2.

φ λ α—φλάζω, παφλάζω, φλασμός; φλε—φλέω; φλι—φλιδή; φλυ—φλύω, φλύαρος; φλοι—φλοῖσβος, ἀφλοισμός,

Sec. 9, 5; *flare, flos, floreo, fluo*; Gothic *uf-biesan*; O. H. G. *plâsan*; Gothic *blôma*; O. H. G. *pluomo*, H. G. *blume*, E. *bloom*; O. H. G. *pluohan*, H. G. *blühen*.

φλεγω—φλέγω, φλόξ; *flagrare, flamma, flamen*; *fulgeo, fulgur, fulmen*.

φρακ—φράσσω = φρακῶ, φράγμα; *farcio, farcimen, frequens*; Gothic *baurgs*; O. H. G. *puruc*, H. G. *berg, burg*; E. *borough*.

φράτωρ, φρατήρ, φράτρα, Ionic φρήτηρ, φρατρία; *frâter*, Gothic *brothar*; O. H. G. *pruodar*, H. G. *bruder*; E. *brother*.

φρέαρ, Sec. 37, 1; Gothic *brunna*; O. H. G. *prunno*, from *brinnan*, to burn.

φυ—ἐφυν, φύω, φύη, φύσις, φώς = *the breeder*(?), φυτώ; *fu—fuam, fui, fore; fi* — in *fio* = *fuio* compare Æolic φύω, *fieri*, anciently *fiere, fierem* not a passive form; *fe—fev—fētus, effētus* from *feo, fevo*; *fēcundus, fēmina, fīlius, fēlix, fēnum, fēnus* see above Sec. 24, θα; Gothic *bauan*, to dwell; O. H. G. *pim*, H. G. and E. *bin*.

φυγ—φυγή, φυγεῖν, φύγω; φύξα = φυγῶ, πεφυζότες Il. XXI. 6, φυλακινός Il. XIII. 102; *fuga, fugio*; Gothic *biugan*; H. G. *biege*.

φύλλον; *folium*; O. L. G. *blad*, O. H. G. *plat*, H. G. *blatt*; E. *blade*.

B. SEMI-VOWELS. PERSISTENT SOUND OF CONSONANTS.

I. LIQUIDS.

XXVI. THE NASAL AND DENTAL LIQUID N.

The Greek *ν* is primitive and radical, answering to the Latin *n*, and in the following roots, stems, and words corresponds to the *n* of the other Indo-Germanic languages:—

ἀν—ἀνεμος; *animus, anima*.

ἀν—ἀνερ, ἀνδρεῖος, for the δ in ἀνδρός Sec. 34, 6, ἡγορέη, ἀγῆνωρ, ἀνθρωπος *the countenance of man*.

να—ναυ—ναῦς, Epic and Ionic νηῦς, νῆϊος, Doric νάϊος; *navis, nauta, nausea*.

νε—νέω, νῆμα, νήθω, χερνῆτις Il. XII. 433; *neo*; O. H. G. *nâan*.

νε—νέος, νεότης, νεοίη Il. XXIII. 604, νεαρός, νέατος, νείατος, νείαυρα, νεοσσός, νεανίας, νεβρός = νεφρ. with hardened digamma; *novus, denuo, nūper*.

νε—νέκς, νεκρός, νεκρία; *neco, nex*.

νε—νέμω, νόμος, νομίζω, νέμεσις “*imputatio*,” *Numa, numerus, nummus*.

νε—νέομαι, νίσσομαι, νόστος, Νέστωρ.

νι—νιφ—νιγν—νίφω, νίφα acc., νιφάς, νιφετός; *nix* = *nigs*, gen. *nivis* = *nigvis*, *ningit*, nasalized = *nigvit*; Gothic *snaiws*, O. H. G. *sneo*, H. G. *schnee*, E. *snow*.

νυ—νέω, νεῦμα; *nuo, nūmen, nūtus*.

ὄνομα = ὄγνωμα from the root γνο, Sec. 20, compare Sec. 9, 5, Ionic οὔνομα, Æolic ὄνυμα, ἀώνυμος, νώνυμος; *nomen* from *gnomen*, compare *cognomen, ignominia*; Gothic *namo*, H. G. *namen*, E. *name*.

ὄνυξ, *unguis* ; H. G. *nagal*, *nagel*, E. *nail*.

ὄνος, ὠνέομαι, Greek root *ῥων*, hence the syllabic augment in ὠνούμην ; *vēnum eo*, *do*, *vēneo*, *vendo*.

Changes of *ν* before *mutes* :

ν, which is a nasal and also a dental liquid, is affected before the mutes according to the classes to which they belong ; it remains unchanged before the dental mutes in κεντέω, σπένδω, λανθάνω ; is changed into the labial and nasal liquid *μ* before the labial mute in κάμπτω, ἄμφω, λαμβάνω, nasalized from λαβ ; and becomes a guttural before a guttural mute, ἄγκυρα, ἄγγελος, λαγχάνω, a nasalized present form of the root λαχ.

XXVII. THE NASAL AND LABIAL LIQUID M.

This is original and fundamental in :

ἀμ—ἀμάω, ἄμητος ; *meto*, *messis*, *messor* ; H. G. *mât*, E. *math*.

ἀμ—*sam*—ἄμα, Æolic ἄμνδης, ὁμοῦ, ὁμός, ὅμοιος ; *simul*, *similis*, *simultas* ; H. G. *sam*, *sammt* ; E. *same* : Sec. 30.

ἀμείβω, *moveo*, Sec. 22.

ἀμύνω, μύνη Homeric ; *munio*, *moenia*, *murus*.

μα—μάομαι, μῶμαι, μέμαμεν, μαιμάω, ματεύω, ἀπρωτίμαστος Il. XIX. 263.

με—*ma*—μήν = μῆνς, Ionic μέis, μήνη, = *the measurer*, μέτρον, μιμέομαι, thence *imitor*, *imago* = *mimago* ; *mensis*, *metare*, *metiri*, *modus*, *mos*, *nimis*, = *ni-m-is* comparative adverb, *without measure* ; Gothic *mena*, *menoth*, O. H. G. *manot*, H. G. *mond*, *monat*, E. *moon*, *month*.

μεγ—*mag*—μακ—μέγας, μακρός, μῆκος, ἀμαιμάκετος ; *magnus*, *major*, *magis*, *macto*, *macte*.

μ εν—μαν—μνα—μένω, μένος; μαίνομαι, μανία; μέμνημαι, μνήμη; *maneo, memini, mens, comminiscor, moneo.*

μ ε ρ—μαρ—μέριμνα, μερμηρίζω; *memor, memoria.*

μ έ σ ο ς, μέσσος, μέσσατος, μεσσάτιος, μεσσηγύς; *medius, dimidius, meridies*, euphonic substitution of *r* for *d*; H. G. *mitte*, E. *mid(dle)*.

μ ή τ η ρ, Doric μάτηρ; *māter*; O. H. G. *muotar*, H. G. *mutter*, E. *mother*.

μ ι γ—έμίγην, μίγδην, μίγνυμι, μίσγω = μιγσκω, μίξις; *misceo, mixtus, mistus*; O. H. G. *miskiu*, H. G. *mischen*, E. *mix*.

μ ι ν—μινύω, μινύθω, μίνυνθα, μείων; *minuo, minor, minister*; Gothic *minnists* = *minimus*, E. *mite*.

μ ο λ—μολεῖν, βλώσκω = μβλωσκω, compare βροτός and Sec. 34, 6, μέμβλωκα, compare ἄμβροτος.

μ ο ρ—μαρ—βροτός = μβροτος, *mortuus*, ἄμβροτος, ἄβροτος = ἄμρ.; παραίνω; μέροπες (?), rather root μαρπ(τω); *morior, marcesco*.

μ υ—μύω, μύστης; *mutus, musso*.

XXVIII. THE LINGUAL LIQUID Λ. L.

ἄ λ—ἄναλτος Homeric; *alo, alumnus, coalesco*, also *cōlesco*, compare *cōgo* from *coago*, *alvus*; so too *ol*—in *olēre, olesco, olus, abolitus, adultus* = *adolitus, exolesco, prōles* from *pro-olo, suboles*. The root ἄλ is extended to ἄλδ—ἄλθ—in ἄλδαίνω, *I nourish*, ἄλθομαι, ἄλθαίνω, *I heal*; H. G. *alt*, E. *old, elder*.

ἄ λ—ἄλη, ἄλασθαι, ἄλέη, ἄλέομαι, ἄλενύμην, ἄλεείναι, ἄλεωρή, ἡλεός, ἡλίθιος, ἄλιτεῖν, ἄλείτης, ἄλιτήμων, ἄλιτήμενος, ἡλάσκειν, ἡλασκάζειν, ἑλάστωρ.

γάλα, stem γαλακτ = γλακτ, γλάγος, γλακτοφάγος Il. XIII. 6, γαλαθηνός, see θα Sec. 24; *lac*, stem *lact*.

Feλ—Faλ—to *throng*, εἴλω, ἐάλην, ἀλείς, ἔελμαι, εἴλαρ, ἴλη, ὄμιλος; ἄλις, ἀλία, ἀλίζω, ἡλιαία, ἀλής, ἀολλής, ἀελλής, ἀολλίζω.

Feλ—ἐλύω *I revolve*, εἰλύω *I envelop*, εἰλυφάω Il. XI. 156, εἰλυφάζω, ἱλλάς Il. XIII. 572, ὀλοοίτροχος, *a rolling stone*, ib. 137 (οὔλαί, οὔλοχύται, ἀλέω, *I grind?*); ἐλίσσω, ἐλιξ, ἐλικῶπες; for the digamma compare Il. XVI. 569; *volvo*; O. H. G. *wellan*.

λα—λήμα, ληλαίομαι, λελίημαι, λίαν, λώϊον, λῶστος, λαρός; *iascivus*; λαF—λάων, λάε = λαF. Od. XIX. 229; λαυ—ἀπολαύομαι, λεία, ληΐς; *lucrum*; H. G. and E. *lust*.

λαός, λῆϊτος, λειτουργία; O. H. G. *liut*.

λεγ—λέγω, λόγος, λέσχη; *lego* etc., also *legūmen*, *diligens*, *neglego*, *intellego*, *religens*, *God-fearing*, compare ἀλέγω Il. XVI. 388, opposed to *neglegens*, *religio*, or from *ligare* = *a chained conscience* (?).

λεῖος, λειότης, λειαίνω; *lēvis*, *levigare*.

λέχριος, λέχρις, λικριφίς Il. XIV. 463, Od. XIX. 451, with suffix φι—φιν and *s* of the plural, compare Latin—*bus*, λοξός; *obliquus*, stem *lic*, *luxus*, *disjointed*; H. G. and E. *link*.

λιχ—λείχω, λιχμάω, λίχνος, ἐπιλίγδην; *lingo*, *ligurio*; O. H. G. *lecchon*, E. *lick*, *lickerish*. Sec. 23.

λυ—to *loose*, λύω, λύω = *seluo*, *luo*, *I expiate*; λυ—to *rinse*, λῦμα, λυμαίνομαι, λούω from λοέω, thence λοέσσαι, λούται contracted from λοεται or λούεται; *lu*—in *polluo*, *diluo*, *adluo*, *alluvies*; *lav*—in *lavere*, *lavare*, *lautus*; *lustrum*.

λ υ κ—λύχνος, λευκός, λεύσσω, σσ from κ*j*, ἀμφιλύκη, λυκάβας, *light-path* = *year*; *lux*, *luceo*, *lucidus*, *diluculum*, *lumen* = *lucmen*, *luna* = *lucna*; O. H. G. *lioht*, H. G. *licht*, E. *light*.

λ ὠ β η, *lābes*, *fall*, *shame*, *stain*, *lābor*, *lābarc*, compare Sec. 8, 1.

ὄ λ ο ς, οὖλος Ionic, *entire*, *compact*, οὖλε = *salve*, οὐλή *a healed wound*; ὀλοόφρων Odyss. from ὀλοός, *of sound mind*; *salus*, *salvus*, anciently *sollus* = *entire*, *safe*, *sollers*, *solidus*; H. G. *salig*, *selig*, E. *silly*, O. E. *seely*.

σ α λ—σάλος, σαλεύω; *salum*.

σ φ α λ—σφαλῆναι, σφάλλω; *fallo*; H. G. *fallen*, E. *fail*, *fall*.

XXIX. THE LINGUAL LIQUID P. *r*.

ἄ ρ—ἄρώω, ἄροτος, ἄροτρον, ἄρουρα; ἔρα, ἔραζε (?); *aro*, *aratrum*, *armentum*, *arvum*; Gothic *arjan*, O. G. *erran* (*arare*); Gothic *airtha*, O. H. G. *erda*, H. G. *erde* (?), E. *ear*,* *earth*, *year*.

ἄ ρ—ἄρα, Homeric ῥά, ἄρ, ἄρηρα, ἀραρεῖν, ἀραρίσκω, ἐριήρης; ἄρτι, ἄρτιος, ἀρτύω; ἀρείων, ἄριστος, ἀρετή, ἀρι—e.g. in ἀριδείκετος; ἀρμός, ἀρμόζω, ἀρμονία, Homeric, *a fastening*; *arma*, *artus*, *ars*, *iners*.

ἐ ρ—ἐρέσσω, ἐρέτης, ἀμφήρης; ἐριθος *a hired servant* (?); *remus*, *remex*, *remigium*, *ratis*, E. *row*.

Ϝ ρ—ἐρέω, εἶρω, εἶρηκα = ἔρ., ἐρήθη = ἔρ., ῥήτρα, εἰρήνη, ὀαρίζω (?); *verbum*; Gothic *vaurd*, H. G. *wort*, F. *word*.

* The young oxen that *en* the ground.—Isaiah, ch. v.

εἶρομαι, ἐρέσθαι, *to ask*, are different from this, and have no trace of the digamma.

ἐρ—σερ—ερμα, ὄρμος, σειρά, εἶρω, thence ἤειρεν Il. X. 499, with the lengthening of the syllabic augment to η to compensate for the absence of the consonantal beginning, ἐερμένος; *sero, sera, sertum, series, servus*.

ὀρ—ὄρωρα, ὦρτο, ὄρσο, ὄρσσο, ὄρνυμι, ὀρίνω, ὀρούω, οὔρον *a stretch*, Od. VIII. 124, δίσκουρα Il. XXIII. 523; *orior, ortus, origo*; variation ἐρ in ἔρχομαι = ἐρσκ.

ὀρ—φορ—to *watch*, ὄρονται Od. XIV. 104, οὔρος, ἐπίουρος, ἔφορος, φρουρός = προορος, τιμάορος, τιμωρός, πυλᾶωρός = πυλᾶορος with varying quantity, πυλωρός, θυρᾶωρός, θυρωρός, ὦρα, ὀράω, ἑώρων, instead of the digamma, οὔδενόσωρα Il. VIII. 178, δυσωρήσωσιν X. 183; H. G. *wart, warten, E. ward*.

ῥεπ—φρεπ—ῥέπω, ῥοπή, ῥόπαλον, makes the foregoing syllable long by position Od. IX. 319, ῥίπτω, καλαῦροψ, *a shepherd's crook*, Il. XXIII. 845; *rēpens*.

ῥιγ—φριγ—ῥίγος, ῥιγέω, ἔρριγα, ῥίγιον, καταριγηλός in which the second syllable is long by position on account of the digamma Od. XIV. 226, ι is universally long; φρικ—φρίξ, φρίσσω; *frīgus, frīgeo, frīgīdus*; on the other hand *rīgor, rīgeo, rīgīdus*; H. G. *friusan, frieren* (?), E. *freeze, froze*.

ῥυ—ῥέω, ῥεύσω, ἑρρύνην, ῥύμη, ῥεύμα, ῥοή, ῥώομαι, ἐρωή, ῥυθμός; *ruo*; O. H. G. *stroum* points to an original root σρυ, H. G. *strom, E. stream*.

Only a few Greek roots which begin with ρ correspond with roots which begin with *r* alone in kindred languages. The roots which in those languages begin with *r* have in

Greek a vowel often prefixed to the ρ, compare e.g. ἐρεύγω, *ructo*; ὀρέγω, *rego*, see Sec. 9, 5. The Greek roots which begin with ρ have for the most part a digamma at the beginning as ῥέζω, see Sec. 20 *ῥεργ*—*ῥεργ*, ῥήγνυμι, *frango*, ῥιγέω, ῥέπω, or a σ, as ῥέω, ῥώομαι, *I stream*. Hence the ρ is doubled in the augment, ἔρρεε, ἔρρύην, ἔρρηξα. Compare for *str* instead of *sr* the Old Latin *stlis*, *slis*, whence *lis*, H. G. *streit*, E. *strife*.

Interchange of the Lingual Liquids r and l.

This change, which is caused by the weakening of *r* to *l*, is not confined to Greek, but takes place also partly between Greek and Latin, and partly between one of these and the Teutonic languages.

1. Within the limits of Greek: ἀρκ—ἀλκ—in ἀρκέω, ἀλκή etc., see Sec. 16; ἀμαρτάνω, ἡμβροτον, ἡμπλακον; ἀμέργω, ἀμέλγω, *mulgeo*, H. G. *milch*, E. *milk*; βρύω *I swell*, βλύω, *I bubble out*, compare φλυ, Sec. 25; κυρ—κυλ in κυρτός, *curvus* and κυλίω, κύκλος, compare *circus*; κάρχαρος, καρχαρόδους Il. X. 360, καρχαλέος, *rough, sharp*; μορύσσω, μολύνω *I defile*; χηραμός *a cleft*, χηλαμός* name of a mountain; Σείριος, σέλας; ἐρ—ἐλ in ἔρχομαι, ἐλθεῖν.

2. Between Greek and Latin: βάρβαρος, *balbus*, *balbutio*; κύκλος, *circus* see above; σέλας, *serenus*; χελιδών, *hirundo*.

3. Between Greek and Latin on the one side and the Teutonic languages on the other: μάρμαρος, *marmor*,

* Liddell and Scott say this is a corrupt form.

H. G. *marmel*, E. *marble*; μορμύρω, H. G. *murmeln*, E. *murmur*; πλατύς, H. G. *breit*, E. *broad*; χρυσός, Gothic *gulth*, O. H. G. *kold*, H. G. and E. *gold*, see Sec. 23; *lis* from *slis*, *stlis*, stem *stlit*, O. H. G. *strît*, H. G. *streit*, E. *strife*. Compare ἀλφ—*arbeit* Sec. 25.

2. ORIGINAL SPIRANTS. Σ (SPIRITUS ASPER). F. JOD.

XXX. THE SIBILANT Σ AND ITS SUBSTITUTE THE ROUGH BREATHING.

1. The original *s* is retained in Greek at the end of words, before mutes at the beginning and in the middle of words, less often before a vowel at the beginning.

α. At the end, so far as the Greek laws of termination permit, compare Sec. 35: e.g., in μένος, stem *μενες*, Skr. *manas*, γένος; as suffix of the nom. sing. masc. and fem. πόσις = ποτις, *patis*, ὄψ = ὄπις, and of the genit. sing. —ος.

β. At the beginning and in the middle generally before mutes:

Root *ἐς*, *to be*; 2 sing. ἐσσί Homeric; 3 sing. ἐστί; 1 pl. ἐσμέν, 2 pl. ἐστέ; imp. ἴσθι = ἐσθι, ἔστω etc., impf. dual ἦστον, ἦστην, 2 pl. ἦστε connected with ἦτε; Latin *sum* = *esum*, *est*, *estis*, etc.; Gothic, H. G. *ist*, E. *is*.

ἐς—*fes*—*vas*, Latin *ves* in *vestis*, ἔννυμι = *φeson*. with assimilated σ, σ is retained in ἔσσο, ἔστο pluperfect, as also in ἐσθής, *vestis*, see below, Sec. 31; instead of the assimilation of σ there is a compensatory lengthening in καταείνυσαν or -είνυν Il. XXIII. 135.

σ τ α—ἴσθημι, where the σ has disappeared at the beginning of the reduplicated syllable, εἰστήκειν = ἔσεστηκειν, see Sec. 17; σ τ ο ρ—in σ τ ο ρέννυμι Sec. 17; ἔστία, Sec. 31.

γ. At the beginning before a vowel :

σ ά ο ς, σῶς, σαόω, σώζω, etc.; *sanus*; O. H. G. *gasunt*, H. G. *gesund*, E. *sound*.

σ α φ ή ς, σοφός; *saphio*, *sapor*, *sapiens*, *sucus*; O. H. G. *saf*, H. G. *sagt*, E. *sap*; *s* has disappeared in ὁπός, *sap*, E. *opium*.

σ έ β ο μ α ι, σέβας, σεμνός = σεβνος.

σ έ λ α ς, σελήνη; *sol*, *serenus*, root *svar*.

σ ι γ ά ω, σιγή, σῆγα, Cretan ἴγα; H. G. *swigen*, *schweigen*, the Greek σ here = the original *sv*, for which the rough breathing ' was used in Greek, compare ἰδρώς, Sec. 21 and below.

σ ύ ς, connected with ύ ς; *sus*, Gothic, *svein*, O. H. G. *sú*, H. G. *sau*, E. *sow*, *swine*.

2. Instead of the original and Latin *s* in the beginning before a vowel, Greek for the most part used the rough breathing ' , often interchanged with the smooth breathing.

ἄ δ η ν, ἄδην, ἄδδην, ἄδος, ἀδηκότες Il. X. 98, also ἄμεναι, ἄσαι, ἄσασθαι Il. XIX. 307, from ἄω; *satis*, *satur*, *satias*, *satio*; Gothic *saths*, H. G. *satt*.

ἄ λ λ ο μ α ι, ἄλμα, Homeric aorist with the smooth breathing ἄλσο, ἄλτο, = ἑάλτο, ἐπάλμενος; *salio*, *saltus*, *salto*.

ἄ λ ς, ἄλμη, ἄλμυρός; *sal*, *salio*, *salsus*, *insulsus*, compare H. G. *sulza*, *sulze*; H. G. *salz*, E. *salt*.

ἄμα, ἄμυδις, ὁμοῦ, etc.; *simul*; H. G. — *sam*, *sammt*, see Sec. 27.

ἅπαξ, root ἄ = *sa*, ἀπλοῦς, *semel*, *simplex*.

ἔδ—*sed*—in ἔδος, ἕζομαι; *sedes*, etc., Sec. 21.

ἐκυρός, *socer*, Sec. 16.

ἐνός in ἔνη καὶ νέα, *senex*, etc., compare O. H. G. *sinis-kalkus*, *seneschalk*, E. *seneschal*.

ἑξ, ἕκτος; *sex*; Gothic *saihs*, H. G. *sechs*, E. *six*.

ἐπτά, ἑβδομος; *septem*; Gothic *sibun*, H. G. *sieben*, E. *seven*.

ἐπ—ἐπομαι, *sequor*; σ before a mute is retained in σπείν, compare ἔσπετε, see Sec. 19, 2.

ἔρπω, *serpo*; εἶρπον = ἐσερπον, see Sec. 18.

ἡδύς, *suavis*, ῑ = *sv*; not aspirated ἡδος, ἄσμενος, see ἄδ, Sec. 21.

ἡλῖος, ἡέλιος, *auselius* (= *Aurelius*); as ὕλη, *silva*, *silā*.

ἡμι—ἡμις, *semi*—, *semis*; O. H. G. *sāmi*—.

ἰδρώς, *sudor*, not aspirated ἴδος, ἰδίω, see Sec. 21.

ὀλός, ἔλκω, having lost the rough breathing ὄλξ, acc. ὄλκα, Doric ὄλαξ, Attic ἄλοξ; *sulcus*.

ὄλος, not aspirated οὔλος Ionic; *salvus*, anciently *sollus*, Sec. 28.

οὔ, οἶ, ἐ, pronoun stem ἐ, ἐός, ὄς, *suus*; *sui*, *sibi*, *se*, originally *sve*, σφε, hardened into σφέ, *suus*; ἴδιος = (σ)φιδιος.

υἱός, Gothic *sunus*, H. G. *sohn*, E. *son*.

ὑπό, ὑπέρ, ὑπτιος, ὑπατος; *sub*, *super*, *supinus*, *supremus*, *summus*.

ὑπνος, *somnus* = *sopnus*, *sopor*; the Gothic *slēpan* differs from this, O. H. G. *slāfan*, E. *sleep*.

ὁ, ἡ, article, a form with the rough breathing from the original pronominal stem *sa*, see Pronouns.

3. *σ* has disappeared :

α. In the beginning of words before vowels, besides the cases of change from the smooth to the rough breathing noticed above, in ἄλοχος, also ἀδελφός; the so-called copula *ā* = *á* in ἄπας, ἄπαξ, ἄμα = *sa*, *sam*, Sec. 27, instead of this also *ō*, compare ὁμοῦ, ἄμα, in ὅπατρος = ὁμοπατρος, ὀγάστωρ; ἐχ—σεχ in ἔχω, Sec. 23; ἔσταλκα = ἐστ. = σεστ.

β. At the beginning before liquids : μικρός, σμικρός, Ionic and Old Attic; νέω = σνεῶ, *I swim*, thence the Homeric impf. ἔνεον Il. XXI. 11; νευρά, O. H. G. *snuor*, νός, *nurus*, O. H. G. *snur*; νίφα, *nix*, O. H. G. *sneo*, E. *snow*; ῥν = σρν in ῥέω, thence ἔρρύην, H. G. *strom*, E. *stream*, Sec. 29, compare *lis*, Sec. 29; compare the disappearance of *st* in *locus*, anciently *stlocus*.

γ. In the beginning before mutes : πτύω, σφύω, σφειν, *spit*, Sec. 18; πένομαι, πόνος, compare σπάνις; κεδάννυμι—σκεδ., κίδναμαι—σκιδν.; τέγος, *tectum*, στέγος; ταῦρος, H. G. *stier*, E. *steer*; the *s* disappearing in *tabula*, root *sta*.

δ. In the middle of a word before *μ*: εἰμί = ἐσμι, for compensatory lengthening, Sec. 9, 2, compare εἶμαι = ἐσμαι, or directly from the Æolic ἔμμι by the preceding assimilation of the *σ*; σμ is moreover a common collocation of sounds in the middle of words, compare πέπεισμαι.

ε. In the middle of a word between vowels, see Sec. 9, 1, c; with regard to the change of the Latin *s* between vowels into *r*, Sec. 11, 3.

The repugnance of Greek to *σ* is especially shown

before vowels at the beginning of words, and between vowels in the middle of words. There is found also a partial and cautious abandonment, even in the Old Æolic and Ionic dialects, of the *h*-sound, which frequently took the place of *σ*, by weakening it into the smooth breathing.

XXXI. THE LABIAL, SEMI-VOWEL SPIRANT *F*, corresponding to the Latin *v*, sporadically represented by the rough breathing in Greek, at the beginning of a word.

1. The Greek *F* has disappeared, or is turned into the vowel *υ*, and is only now to be recognized by the traces it has left, and by comparison with kindred languages, Sec. II, 2.

ἀ *F*—ἄημι, ἄητο, ἄητος, ἀήτης, δυσαής, ἀήρ, ἄελλα, αὔρα, ὑλή; αὔω *I call*, αὔσας, αὔτη, αὔτέω, thence the Homeric, ἱνεως = ἀναφος, ἰωή with reduplication; ἀέσαι *to sleep*, ἰάνω reduplicated present; ἀίσθω *I breathe out*; αὔτμή, H. G. *âtum, athem*; *ventus*, Gothic *vinds*, E. *wind*.

ἀ *f*—*au*—αῖω = ἀῖω, αἰσθάνομαι, probably also ἐπητής. Od. XIII. 332, ἐπητής XXI. 306; οὔς, ὠτός, οὔατα Homeric; *audio, oboedio, auris, ausculto*; Gothic *auso*, H. G. *ohr*, E. *ear*.

αἰεῖ = αἰφει, locative form, αἰών, αἰδιος, ἐπ-ηε-τανός; *aevum, aetas = aevitas*; Gothic *aivs, time*, O. H. G. *ewâ, law, wedlock*, E. *ever*, H. G. *je, nie = ni-aiv*, E. *never*.

ἐ *a p* = *F*εap, ἦρ; *ver*.

*F*ε *p*—ἐρῶω, ἐρῶε, ἐρρέτω, ἐρῶων, Homeric ἀπό-ερσε; ἐρύω, etc.; *verro, I sweep*.

fi—vi—iτέα, willow, *vitis*, *vimen*, *viētus*, *pliant*, *withered*, O. H. G. *wid*, H. G. *weide*; thence *οἶνος*, *vinum* = *voinum*, *vinea*; H. G. *wein*, E. *wine*.

Compare *fid—vid*—in *ἴδμεν*, *οἶδα*, *ἴστωρ*, *video*, Sec. 21. *ἐλύω*, *volvo*; *οἶκος* = *φοικ.*, *vicus*; *ἔργον* = *φεργ.*, H. G. *werk*, E. *work*; *φει* in *ἔπος*, *vox*; *ἐμέω*, *vomo*; *ἴον*, *viola*; *ἴος*, *virus*; *ἴς*, *ἴνες*, with suff. *ἴφι*, thence adj. *ἴφιος*, *vis*; *f* in the middle of a word: *οἷς* = *οῖς*, *ovis*; *ὠόν* = *ὠφιον*, *ovum*; *νέος* = *νεφος*, *novus*; *πλέω* = *πλεω* root *πλυ*, *pluo* = *pluo*, *pluvia*.

2. Original *f*, Latin *v*, is represented by sp. asp. ':

φεσ—ves—έννυμι = *φεννυμι*, *εἶμα*, Æolic *ἔμμα* = *φесμα*, *ἀνείμων* Od. III. 348. The digamma is traceable in *καταείνυσαν*, *ἐπιειμένος*, *έέσσατο*; *εἶνός*, *ειανός* subst., *ειᾶνός* *pliant*; *vestis*, *vestio*; ' has disappeared in *έσθής*.

Compare *εσπερος*, *vesper*; *εστία*, Ion. *ιστή*, *εστιάω*, Attic imperfect *ειστίων* = *έφест.*, *Vesta*, root *vas*, *us* in *uro*, Sec. 33; *ἴστωρ*, connected with *ἴστωρ* = *fidτορ*, *ιστορία* from *fid*, *vid*.

ὅδ—ud—vad, Sec. 21.

3. For the change of *f* to a vowel see Secs. 9. 11.

XXXII. THE PALATAL, SEMI-VOWEL SPIRANT JOD has disappeared in Greek, and is retained as the Latin *j*, English *y*, *g*.

See Secs. 9. 11. 34, for examples of *j* becoming a vowel, for its disappearance, assimilation, and amalgamation with other letters.

The original *j* as the beginning of a root is represented in Greek:

1. By the mixed sound ζ, which has arisen from *dj*, *gj*:

ζυγ—*jug*—ζυγόν, ζεύγνυμι, ζώννυμι; *jūgum*, *jungo*, *jūmentum*, *jūgis*, united together, therefore lasting, *juxta* a superlative form = *jugista*; Gothic *juk*, H. G. *joch*, E. *yoke*; original root *ju* in *jus*, *right* = *bond*. Perhaps identical with this is:

ζυ—*ju*, to mix = to bind together, in ζύμη leaven, ζωμός, *jus*, *soup*.

ζεσ— = *jas* in ζέω *I seethe*, ζέσμαι, ζέσις; O. H. G. *gerjan*, also *jesan*, H. G. *gischt*, compare *jäst*, E. *yeast*.

Ζεύς = *djeus*, *Juppiter* = *djup*. from the root *dju*, *div*, Sec. 21.

δίζημαι reduplicated form = διδῆμαι, so too δίζω II. XVI. 713, probably also διφάω *ibid.* 747; root ζα, ζη = *dja* = *ja*, to go, strive, seek, ζητέω.

ζα Æolic in composition = *dja* = *διά*: ζάθεος, ζάκοτος, ζαμενής, ζατρεφής, ζάχολος, ζαχρηής; ἀζηχής = ἀδιεχης (?).

2. By δ alone instead of *dj* in ζ:

δα = the above-named ζα for *δια* in δάσκιος, δαφεινός, δάπεδον; δή = *dja* in *jam*.

3. By the rough breathing ' in ἦπαρ, *jecur*, Skr. *yakrt*, Sec. 6, 3, Sec. 19, 2; ὄς, ῆ, ὄ = *yas* relative and demonstrative pronoun, see below.

ἐ—*ja*—ἔημι reduplicated = *jijami*, causative form of *ja*, to go, see above *impf.* ἔην, 2, 3 *sing.* ἔεις, ἔει according to the analogy of contracted verbs, Epic aorist ἔηκεν with syllabic augment instead of the *j* at the beginning of the root; εἶμεν with augment, ἔμεν, ἀφέτην without augment,

II. XIX. 402 $\epsilon\omega\mu\epsilon\nu = \omicron\mu\epsilon\nu$; thence $\eta\mu\alpha$, $\eta\mu\omega\nu$ II. XXIII. 886, 891.

4. By the smooth breathing, or it disappears in $\iota\acute{\alpha}\pi\tau\omega$ reduplicated = *jij*. compare *jacio*, an extension of the root *ja* to *jaπ*, Latin *jac*.

XXXIII. GREEK PURE VOWEL ROOTS.

$\alpha \upsilon$ — $\epsilon\upsilon$ — $\alpha\upsilon\omega$ *I burn, I dry*, $\alpha\zeta\omega$ *I wither*, $\epsilon\upsilon\omega$, $\epsilon\upsilon\omega$ *I singe*, $\alpha\upsilon\omicron\varsigma$, $\alpha\upsilon\alpha\lambda\epsilon\omicron\varsigma$, $\alpha\upsilon\sigma\tau\eta\rho\omicron\varsigma$, $\alpha\upsilon\chi\mu\omicron\varsigma$; $\epsilon\omega\varsigma$, $\eta\omega\varsigma$, $\alpha\upsilon\omega\varsigma$ Æolic, $\alpha\upsilon\rho\iota\omicron\nu$, $\eta\rho\iota$, $\eta\acute{\epsilon}\rho\iota\omicron\varsigma$; *us*—in *uro* = *ouso*, *ussi*, *ustus*, *aridus*, *aurora* = *ausosa* ; original root *vas* = *us* in *Vesta*, $\epsilon\iota\sigma\tau\acute{\iota}\alpha$, Sec. 31, 2.

η —in $\eta\mu\acute{\iota}$, 3 sing. $\eta\tau\acute{\iota}$ Doric, pret. 1 sing. $\eta\nu$, 3 sing. η ; *ajo* = *agjo*, *adagium*, *nego*.

ι — $\epsilon\iota\mu$, 1 pl. $\iota\mu\epsilon\nu$, 3 pl. $\iota\alpha\sigma\iota$, imperf. $\eta\iota\alpha$, Att. $\eta\eta\epsilon\nu$, $\eta\eta\epsilon\mu\epsilon\nu$ with temporal augment, $\epsilon\iota\sigma\omicron\mu\alpha\iota$, $\epsilon\iota\sigma\alpha\tau\omicron$, $\iota\omicron\varsigma$, $\iota\theta\mu\alpha$, $\omicron\iota\tau\omicron\varsigma$, $\omicron\iota\mu\omicron\varsigma$, $\omicron\iota\mu\alpha$, $\omicron\iota\mu\acute{\alpha}\omega$; *imus*, *itum* ; *eo*, *eam*, *eunt* with assimilation of the radical vowel *i* before *o* and *a* to *e*, *iter*, *indutiae* = *induitiae*, compare the archaic *induperator* = *imperator* ; from the root *i* in the last instance certainly also $\alpha\iota\acute{\epsilon}\lambda$, *aevum*, *aetas*, Sec. 31.

XXXIV. CONSONANTAL LAWS OF SOUND.

These relate to the changes which take place in consonants under the influence of other consonants. They are as follows :

1. Assimilation (*a*) regressive, of the preceding sound to that which follows : σ to the following ν , μ , in $\epsilon\tilde{\nu}\nu\mu\iota$

from $\phi\sigma\nu$., $\xi\mu\mu$ Doric = $\epsilon\sigma\mu$, $\epsilon\iota\mu\acute{\iota}$; of the originally existing spirants σ , ϕ to ρ in $\epsilon\rho\rho\acute{\nu}\eta\nu$, $\pi\epsilon\rho\acute{\iota}\rho\rho\acute{\nu}\tau\omicron\varsigma$ from $\rho\nu$, $\sigma\rho\nu$, $\alpha\rho\rho\acute{\rho}\eta\kappa\tau\omicron\varsigma$ = $\alpha\phi\rho$; of the labials to μ , $\tau\acute{\epsilon}\tau\tau\iota\mu\mu\alpha\iota$ from $\tau\rho\acute{\iota}\beta\omega$, $\kappa\omicron\mu\mu\acute{\omicron\varsigma}$ = $\kappa\omicron\pi\mu$., $\gamma\rho\acute{\alpha}\mu\mu\alpha$ = $\gamma\rho\alpha\phi\mu\alpha$; of the dentals to σ or $\sigma\sigma$ (for the most part to one only) : $\pi\omicron\sigma\sigma\acute{\iota}$, $\pi\omicron\sigma\acute{\iota}$ = $\pi\omicron\delta\sigma\iota$, $\eta\sigma\alpha\tau\omicron$ = $\eta\delta\sigma$., $\delta\acute{\omega}\mu\alpha\sigma\iota$ = — $\tau\sigma\iota$, $\alpha\nu\sigma\iota\varsigma$ = — $\tau\sigma\iota\varsigma$, $\kappa\acute{\omicron}\rho\upsilon\sigma\iota$ = — $\theta\sigma\iota$, $\delta\alpha\acute{\iota}\mu\omicron\sigma\iota$ = — $\omicron\sigma\iota$;

(b) Progressive, of the following sound to the preceding : f , j in $\xi\acute{\epsilon}\nu\omicron\varsigma$ Æolic from $\xi\acute{\epsilon}\nu\phi\omicron\varsigma$ Doric, $\tau\acute{\epsilon}\tau\tau\alpha\rho\epsilon\varsigma$ from $\tau\epsilon\tau\phi$., $\acute{\iota}\pi\pi\omicron\varsigma$ = $\acute{\iota}\pi\phi\omicron\varsigma$, $\acute{\iota}\kappa\phi\omicron\varsigma$, *equus*, Æolic $\kappa\acute{\epsilon}\nu\omicron\varsigma$, $\kappa\acute{\tau}\acute{\epsilon}\nu\omega$ from $\kappa\epsilon\nu\phi\omicron\varsigma$, $\kappa\tau\epsilon\nu\acute{\jmath}$, $\mu\acute{\alpha}\lambda\lambda\omicron\nu$ = $\mu\alpha\lambda\acute{\jmath}\omicron\nu$ from $\mu\acute{\alpha}\lambda\alpha$, compare *melius*, $\alpha\lambda\lambda\omicron\mu\alpha\iota$ = $\alpha\lambda\acute{\jmath}$. compare *salio*, $\alpha\lambda\lambda\omicron\varsigma$ = $\alpha\lambda\acute{\jmath}$. *alius*, $\sigma\tau\acute{\epsilon}\lambda\lambda\omega$ = $\sigma\tau\epsilon\lambda\acute{\jmath}\omega$; $\tau\tau$ = $\tau\acute{\jmath}$: $\eta\tau\tau\omega\nu$ = $\eta\tau\acute{\jmath}\omega\nu$, originally $\eta\kappa\acute{\jmath}\omega\nu$, compare $\eta\kappa\iota\sigma\tau\alpha$; $\epsilon\lambda\acute{\alpha}\tau\tau\omega\nu$ = $\tau\acute{\jmath}\omega\nu$, originally $\epsilon\lambda\alpha\chi\acute{\jmath}\omega\nu$, compare $\epsilon\lambda\alpha\chi\acute{\upsilon}\varsigma$; instead of the assimilation of the σ of the first aorist to $\lambda\mu\nu\rho$ preceding, a compensatory lengthening of the syllable takes place : $\epsilon\sigma\tau\epsilon\iota\lambda\alpha$, Æolic $\epsilon\sigma\tau\epsilon\lambda\lambda\alpha$, from $\epsilon\sigma\tau\epsilon\lambda\sigma\alpha$, $\epsilon\phi\eta\nu\alpha$ = $\epsilon\phi\alpha\nu\sigma\alpha$, $\eta\gamma\gamma\epsilon\iota\lambda\alpha$ = $\eta\gamma\gamma\epsilon\lambda\sigma\alpha$, $\epsilon\gamma\acute{\epsilon}\iota\nu\alpha\tau\omicron$, Æolic $\epsilon\gamma\acute{\epsilon}\nu\iota\nu\alpha\tau\omicron$, from $\epsilon\gamma\epsilon\nu\sigma\alpha\tau\omicron$.

2. The approximation (a) of the foregoing sound to the following : before τ and σ only a *tenuis* ($\lambda\epsilon\kappa\tau\acute{\omicron\varsigma}$ from $\lambda\epsilon\gamma$, $\lambda\acute{\epsilon}\xi\iota\varsigma$ = $\lambda\epsilon\kappa\sigma\iota\varsigma$, $\delta\epsilon\kappa\tau\acute{\omicron\varsigma}$ from $\delta\epsilon\chi$), before δ a *medial* ($\gamma\rho\acute{\alpha}\beta\delta\eta\nu$ from $\gamma\rho\alpha\phi$), before θ an *aspirate* ($\epsilon\lambda\acute{\epsilon}\chi\theta\eta\nu$). The dentals δ , τ , θ change into the spirant σ before μ : $\eta\mu\sigma\mu\alpha\iota$ ($\acute{\alpha}\nu\mu\tau$), $\pi\acute{\epsilon}\pi\epsilon\iota\sigma\mu\alpha\iota$ ($\pi\iota\theta$) ; on the other hand $\acute{\iota}\delta\mu\epsilon\nu$ Ionic, connected with $\acute{\iota}\sigma\mu\epsilon\nu$, $\acute{\omicron}\delta\mu\acute{\eta}$, $\kappa\epsilon\kappa\omicron\rho\upsilon\theta\mu\acute{\epsilon}\nu\omicron\varsigma$; the gutturals κ , χ into γ , $\delta\acute{\omicron}\gamma\mu\alpha$ from $\delta\omicron\kappa$, $\tau\acute{\epsilon}\tau\upsilon\gamma\mu\alpha\iota$ from $\tau\upsilon\chi$, like $\acute{\iota}\kappa\mu\epsilon\nu\omicron\varsigma$, $\acute{\alpha}\kappa\alpha\chi\mu\acute{\epsilon}\nu\omicron\varsigma$ (reduplicated root $\acute{\alpha}\kappa$) Ionic ; τ before ι in the endings of stems and inflexions, except in Doric, changes

into σ, φησί, Doric φατί, on the contrary τι of the 3 p. sing. is retained in ἐστί; φέρονσι, Doric φέροντι, τιθείσι = τιθεντι, φασί, Doric φαντί, εἴκοσι, Doric φίκατι, γερονσία = γεροντια, ἀναισθησία from ἀναίσθητος, πλούσιος from πλούτος, σύ, Doric τύ. (b) Of the following sound to the preceding, σχίζω, from σκιδ, *scindo*, *scidi* (from the aspirated tenuis, under the influence of the preceding spirant σ), πάσχω from πασκω, παθσκω, ἔρχομαι = ἔρσκ. after the disappearance of the σ.

3. The blending of two sounds in one mixed and hissing sound : δj, γj into ζ; at the beginning of a root, Ζεύς, ζα—Æolic, Sec. 32, 1; in the beginning of a word, ἔζομαι = ἔδj., *sed* —, σχίζω = σχιδjω, τράπεζα = τετραπεδjα, ἀργυρόπεζα; ἄζομαι = ἄγj., ἅγιος, κράζω = κραγjω, στίζω, Sec. 17, μείζων = μεγjων, μέγας, *magnus*; on the other hand, ἔρδω from *φεργjω* instead of ἔρζω, by metathesis ῥέζω, Sec. 20. τj, θj, κj, χj, into σσ (assibilation); λίσσομαι = λιτj., compare λιτέσθαι, λιτή; μέλισσα = — τjα, ἱμάσσω = ἱμαντjω, where the ν disappears before σ, ἐρέσσω = — τjω, ἐρετμός; κρείσσω = κρετjων; κορύσσω = — θjω, βάσσω = βαθj. from βαθύς; πέσσω = πεκjω from πεκ (*coq*) connected with πεπ, Sec. 19; πίσσα = πικjα, *rix*; ὄσσε = ὀκjε (*oculus*), so too ὄσσομαι; ὄσσα = ὀκjα (*vox* Sec. 19, 2); ἦσσω = ἦκjων, γλίσσω from γλυκός; πλήσσω from πλακ, πρήσσω, πράσσω from πρακ, φράσσω from φρακ (κ weakened to γ in ἐπλήγην, ἐπέπραγα, ἐφράγην), φρίσσω from φρικ, ἄνασσα = ἀνακjα; ἐλάσσω = ἐλαχjων, βράσσω = βραχj. from βραχύς, *bre(g)vis* (not βραδύς), θάσσω from ταχύς. A single instance of σσ = δj occurs

in *πρόφρασσα* Homeric feminine of *πρόφρων* = *προφραδῖκα* instead of the expected *ζ* as in *ἀργυρόπεζα*.

4. Dissimilation to avoid identity of sound : change of dentals before *τ* and *θ* into *σ* ; *ἴστωρ* from *ἴδτ.*, *ἀνυστός* = *ἀνυτ-τος*, *πίστις*, *πιωτός* = *πιθτ.*, *πεισθῆναι* = *πειθθ.* ; the same also happens when the *ν* disappears before *σ* ; *κεστός* from the stem *κεντ*, *πέποσθε* for *πεποσσε* for *πεπονθε*.

5. Phonetic law of the aspirates : avoidance of aspirates at the beginning of two syllables which follow each other : *ἐτέθην*, *ἐτύθην*, from the roots *θε*, *θυ*, *σώθητι* for *σωθη-θι*, compare *ἀμπέχω*, *ἐκεχειρία* ; on the other hand, *ἐχύθην*, *φάθι*. When according to the laws of sound a *θ* loses its aspirate at the end of a root it is transferred to a at the beginning of a root, *τρίχος* — *θρίξ*, *τρέχω* — *θρέξομαι*, *ταχύς* — *θάσσω* = *ταχῖ*, on the other hand when an aspirate is retained at the end of a root before *θ*, *θ* still stands at the beginning instead of *τ* ; *ἐθρέφθην*.

6. Insertion of a sound : between *νρ*, *μρ*, *μλ* in *ἀνδρός* = *ἀνρος*,—notice however the remarkable shortening of the first syllable in *ἀνδροτήτα* Il. XVI. 857. XXIV. 6, which takes no notice of the consonant which is inserted,—*γαμβρός* = *γαμρος*, *μεσημβρία* = — *μρια*, *ἄμβροτος*, shortened into *ἄβροτος* Il. XIV. 78, = *ἀμροτος* from *μρο* = *mor* (*morior*) ; *ἡμβροτον* = *ἡμροτον*, by metathesis from *ἡμαρτον*, thence *ἀβροτάξομεν* Il. X. 65, compare *ἡμπλακον* ; *μέμβλωκα* = *μεμλ.* from *μολ*, *μλο*, *μέμβλεται*,

μέμβλετο Homeric = μεμλ. = μεμέληται, ἐμεμέλητο. In the beginning βρ, βλ, instead of μρ, μλ; βροτός = μροτ., βλώσκω = μλωσκω, μολεῖν. ὑπεμνήμυκε with epenthetic ν, II. XXII. 491, as in νώνυμος, is an exception.

7. The loss of consonants: σ between vowels see above; between consonants τέτυφθε = — φσθε; of τ in κέρως = κέρατος, stem κρατ, φέρει = φερετι, see below; of ν between vowels in μείζους from μείζονες, before σ in φέρουσι, with compensatory lengthening of sound, κεστός from κενστ; of ντ, νδ in γέρουσι = — ντσι, σπείσω = — νδσω, Sec. 9, 2; 11, 3.

8. Change of position, or metathesis of the root consonants: θαν — θνα in θανείν, θνήσκω, θρα — θαρ in θράσος, θάρσος; δέδορκα, ἔδρακον, see Variations of Roots, Sec. 37, 4.

9. Law of reduplication: Of two consonants at the beginning of a word the first only is reduplicated; of the aspirates the first only of their component parts—the corresponding tenuis κ, τ, π,—γέγραφα, πέφυκα, πέφνον = πεφενον, κεχώρηκα; present reduplication with the vowel ι, ἴστημι = σιστ., τίθημι, κίχρημι. For further details see below on Present and Perfect Stems; the metathesis of the reduplication ἔμμορε = μεμορε, is like that in stems which begin with ρ.

XXXV. THE LAWS OF THE ENDING.

1. The Greek language dislikes consonantal endings. No word ends in a mute, except οὐκ from οὐχί, and ἐκ from ἐξ = ἐκς, but semi-vowels only ν, ρ, σ (ψ, ξ) close the word. Other consonants are discarded, or changed into ν, σ; ἔφερε(τ), ἔφερον(τ), λέγου(τ), λεγέτω(τ), δός = δοθ = δοθι, γάλα = γαλακτ, παῖ vocative = παιδ, γύναι = γυναικ, ἄνα = ἀνακτ, γέρον = γεροντ; τ disappears in the neuter pronoun τί = τιτ, compare *quid*; τ at the end of a word is changed into σ in the neuter participle, εἰδό, from εἶδοτ, and in adverbs in ως, originally ωτ. So σ disappears before consonants at the end of a word; in οὕτως ἀτρέμα, ἄχρι; in φι as suffix of the plural, on the other hand compare λικριφίς, *nobis*.

2. Greek endings do not allow every combination of the final σ with the foregoing consonant; ποῦς from ποδς, ἐσθής = ἐσθητς, τέρας = τερατς, δαίμων — ονς, φέρων — οντς, εἰδώς = — φοτς, μήτηρ — ερς, ποιμήν — ενς, εὐμενής — εςς, τιθείς = τιθεντς, a compensatory lengthening; on the other hand, however, φάλαγξ, λύγξ, φλόξ, κόλαξ, ὄψ, ἄλς.

3. The original *m* in 1st pers. sing. and acc. sing. becomes ν or is discarded; ν in person-endings from μ. ἔφερον; ἦν, connected with ἦα, ἔα, ἦ, compare *eram* from *esam*; in the optative of verbs in μι εἶην; φέρω(μι); compare δῶ from δομ, γέγονα(μι), οἶδα, Æolic φοῖδημι, ἔδειξα(μ); πατέρα, original form *pataram*; compare δέκα, *decem*.

4. The so-called *ephelkystic* *ν*, or *ν* suffixed, is not original, but a supplementary extension of a word ending with a vowel by taking *ν* to avoid the elision and strengthen the final syllable; in ἔλεγεν the *ν* appears after the *τ* which originally ended the word is discarded. This *ν* becomes fixed in 1st pers. plur. of the *verb* — *μεν*, from the original *μες* = *mas*, *masi*, after the disappearance of the *s*; φέρομεν from φέρομε, original and Doric φέρομες.

5. Latin is less capricious in its endings. It allows the guttural and dental tenues even in combination with other consonants, *lac*, *hunc*, *sunt*, *est*, and differs from the Greek in admitting *m*, *d*, *l*. It avoids only the labial tenuis, as well as the combination of two mutes, *lac* instead of *lact*; *d* is discarded in the ablative singular and adverb, *patred*, *facillumed*, but retained in the neuter pronoun *quid*, *id*; with regard to the disappearance of *s* see Sec. 11, 3; and in case-endings, Sec. 47.

PART II.

FORMATION OF ROOTS AND STEMS.

XXXVI. CONCEPTION OF ROOTS AND THEIR FORMATION—REDUPLICATION—PRIMARY AND SECONDARY ROOTS.

1. A root is the simplest combination of sounds which contains a meaning without the help of any elements of grammatical relation. It expresses an idea without any sort of close and concrete definition or application.

It has no pronominal suffix—this first appears in forming stems and words to express the noun and verb ; it is therefore in itself neither nominal nor verbal, but expresses indifferently the sense of naming or of affirming denoted by the noun and verb ; it is purely abstract.

For example, the primitive root *da* is the common source of the verbs *δίδομι*, *do*, of the nouns *δοτήρ*, *δοτός*, *δόσις*, *dator*, *datus*, *dos*, *donum*. Apart, therefore, from those noun and case endings which go to form the stem, and simply by reason of its general signification, it can designate, though in a non-differentiated and vague manner, *the giver*, *the recipient*, and *the gift*. Deprived, however, of the predicative verbal suffixes it can mean nothing so

precise as "*he gives*," etc. The bare root can no more contain such a synthesis of a subject with a predicate denoting a *judgment*, than it can imply the distinction between the thing done and the doer of it, or the definitions of sex and case.

2. Since the root is unable to express relation or concrete definition, it follows that it is not admitted by itself, as a mere root, into developed language. By linguistic analysis, it is artificially discovered and made clear, so that

(α) From a word can be subtracted not only all elements of grammatical relation, or pronominal suffixes, but also their influence on the sound of the root, as conditioned by the laws of sound.

(β) The root-vowel also, which has been lengthened or increased, can be traced back to its simple and short fundamental vowel.

(γ) Lastly, a sound which has been in any way lost at the end or from the body of a word can be supplied through the comparison of fuller and more original root-forms of the same or cognate languages. Compare for example, ἐστί, root ἐς; τίθημι θε; ἵστημι στα; ζεύγνυμι ζυγ, *jungo jug*, Ζεὺς, *Jupp. div, dju (ju, jov)*; ἔζομαι sed; ἵημι ἐ, ja; πέποιθα, πίστις πθ; εἶμι, οἶτος ι; εἰμί, εἶην, ἔα ἐς, κρείσσω κρετ, βάσσω βαθ, πάσσω παχ; μακρός, μάσσω, μῆκος, *magnus, major μακ, mag*; ἔαδα, ἡδύς, ἡδος, *suavi sua*; ἰδῶ, ἰδρώς, *sudor, sveiz svīd*; ὄψ, *vox fep, voc*; ῥέω, ἐρρύην, O. H. G. *stroum*, E. *stream* from ῥυ, σρυ, etc.

3. Closely connected with the lengthening and increase of the root-vowel is a further amplification of the root in order to express relation. This also must be removed in order that the pure root may be reached, and is called

REDUPLICATION.—It consists of a full or partial iteration of the root in order to express a more intensive meaning, and is found both in the noun and in the verb. In the noun, for example in ἀκωκή root ἀκ, ἀγωγή root ἀγ, διδαχή root δακ, ἰωγή root φαγ, ἰωή root ἄφ, ἰονθος, not Homeric, from the root ἀνθ; partly with increase of the vowel in the root-syllable, as in ἐτήτυμος, partly with the reduplicate vowel weakened to ι, compare *ciconia*, *cicatrix*, analogous to the verbal present reduplication, partly with both; without this in μάρμαρος root μαρ, κάγκανος root κατ, κάρχαρος root χαρ in χαράσσω, with which compare *furfur*; lastly in nouns such as λαίλαψ, δαιδάλεος, παιπαλόεις, ἀμαιμάκετος with diphthongal reduplication.

The verbal reduplication is partly variable, and so to speak transitory, attaching to individual tense stems. In the present tense it expresses duration, in the perfect, conclusion of the action, in the aorist it simply intensifies the meaning. Partly it is stable, and in one sense goes back to the root itself, as especially in certain Latin verbs; *bibo* root πι in πίνω, πο in ποtus, Sec. 18, *coquo* reduplicated root ωσ, compare πεκ, πεπ, Sec. 19, 2, *vinco* reduplicated root γνιγ, νιγ in νίχι, compare *quicken*, originally γι = βι in βίος, νι Sec. 22. The Greek verbal reduplication on the other hand, except for example in ἰάλλω, ἰάπτω, ἰαύω, is almost peculiar to certain tense-stems, ἵστημι, ἕστηκα, as compared with ἕστην, root στα; κίχρημι, as

compared with ἔχρησα root χρα; πίπτω, πεσεῖν, root πετ; πέποιθα, πεπιθεῖν, πείθω.

4. PRIMARY AND SECONDARY ROOTS.—Other extensions of the original root exist in guttural, dental, and labial affixes to the original vowel-ending, which have coalesced more or less firmly with the root, and are universally or partially retained in the verbal inflexions.

These are the so-called root-determinatives, which stamp with greater distinctness the idea of a root. Compare ζυγ, ζυ Sec. 32, πτακ, πτα Sec. 18, δακ in διδάσκω from the original δα in δέδαε Sec. 21, μαθ, παθ in μαθεῖν, παθεῖν from the original μα, πα, πλα, πλαθ in πίμπλημι, πλήθω, πλήθος; tud in tundo, tutudi and τυπ in τύπτω, lead back to a common primitive form tu, τυ, which combined the idea of thrusting and striking.

The shortest form of the root is the most original, and also of the most general meaning: compare *i*, to go, *ed*, to eat, *da*, to give, *ju* in *jus*, *law* and *jus*, *broth* = to bind and mix, ζυγ, jug, to bind together.

All polysyllabic so-called roots are derivatives, compare ἀλειφ in ἀλείφω and λιπ in λίπα, ἐλαχ in ἐλαχύς, etc., and leg in λέvis from legvis. The present stem is very frequently a root which has been extended by reduplication accompanied by a nasal sound and a verbal suffix, for example: γίγνομαι from γεν, λαμβάνω from λαμβ from λαβ with suffix αν, λαγχάνω λαχ, ρυμφο, ρυφ.

XXXVII. MARKS AND PECULIARITIES OF THE ROOT.

1. Generality of meaning.

The root is a pure abstraction, Sec. 2, 2, of vague and indefinite signification, capable of further extension, often difficult to bring under a precise and single expression.

The root begins to differentiate itself as soon as it enters into the use of actual language, so as to denote essentially different and distinct objects and modes of action. Examples: root πετ, *pet*; the general idea is that of *hasty movement through empty space*, thence, (1) πέτομαι, *I fly*, πεννα (*petna*), (2) πετο, *I strive*, (3) πίπτω, *I fall*.

Root φα, *fa* (secondary root φαν, φαf); the general idea is of *giving knowledge*, thence (1) φημί, *fari*, etc. (2) φαίνω, φῶς, *fax*, etc.

Root ἄρ, ἐρ, *to plough, to row*; the general idea is of *labour in a yielding substance*; taken together with ὄρ, the general idea is of *stirring up*.

Root θν, *fu, to roar, to bluster, to smoke, to sacrifice*, in θύω, θυμός, θύος, *fumus*; the general idea is that of *violent movement*.

Root τερ, in τείρω, τρέω, *tero, terebra, to rub and to bore*; the general idea is that of *friction*.

Root φρυ, φυρ in (1) φρέαρ = φρεφάρ, Gothic *brunna*, H. G. *brunnen*, (2) in O. H. G. *brinnan, to burn*, (3) πορφύρω *to wave*, (4) πορφύρα *purple*; the fundamental meaning comprises in it the general idea of *to well, to wave, to burn, to shimmer*.

Root ζυ, *ju* in ζυγόν, *jungo, jus*; root τυ, *tu* in τύπτω, *tundo*, see above.

2. The root is always and unconditionally a monosyllable, and the vowel is short, Sec. 7 : *i*, to go; *es*, to be, *da*, to do, to give; *ed*, to eat; *bi*, *pi*, *po*, to drink; *vi*, *βι*, to live; *vid*, to see; *ves*, *ἐς*, to clothe; *sta*, to stand; *αἶθ*, originally *ιθ* to kindle; *vas*, *us* (*εὖ*), to burn; *pet*, to fly, to fall; *φν*, *fu*, to become; *θε* (*dha*), to place, to do; *sed*, to sit; *fa*, to speak, to shine; *mor*, *mro*, to die; *dic*, to show; *stor*, *ster*, *stra*, to strew; *Fop*, *ver*, *war*, to wait; *spec*, *σκεπ*, to spy; *vart*, *ver*, to turn; *torc*, *τρεκ*, *τρεπ*, to twist; *plu*, *πλυ*, to flow; *ρν*, *σρν*, to stream; *scand*, to climb; *scid*, to cleave; *ta*, *ten*, to stretch; *er*, to rub, to bore; *tud*, *τυπ*, to strike; *ar*, *αρ*, to plough; etc.

3. Roots may be classed according to their function as (α) verbal and (β) pronominal, or roots which express ideas and relations, also termed predicative and demonstrative, or material and formal. These two classes of root sometimes do not differ in form; as in *i*, to go, which is also demonstrative, *κι* in *κεῖμαι*, *quies*, also interrogative and indefinite in *quis*, *τις* = *κis*, *ta*, to stretch, also demonstrative = *he*.

4. Varieties of form in a root, occasioned not only by the change of the primitive vowel *a* into *e* and *o*; but also by

(1) Metathesis or change in the position of the sounds, *αῖφ* in *ἀήρ*, *va* in *ventus*; *αλφ*, *lab*, *αλφάνω*, *labor*; *αρδ*, *ραδ* Sec. 21; *βαλ*, *βλα* in *βαλεῖν*, *βέβλημαι*; *ερ* — *ra* in *ἐρέσσω*, *ratis*; *γεν*, *γνα* in *γένος*, *γνήσιος*, *gnascor*; *gna*, *gno*, in *gnosco*, *gnarus*, Gothic *kannjan*; *θαν*, *θνα* in *θανεῖν*, *θνήσκω*; *θαρ*, *θρα*, Sec. 34, 8; *καμ*, *κμα* in *καμεῖν*, *κεκμηώς*,

ἀκμής; κρι, *cer*, *cre* in κρίνω, *cerno*, *crevi*; *men*, *μνα*, *mens*, μένος, μνήμη; μολ, *μλο*; *mor*, *μρο*, Sec. 34, 6; ὄπ, *πε*, reduplicated *πεπ*, in ὀπτός, πέπτω, πέπων, Sec. 19, 2; *πετ*, *πτα* in πέτομαι, ἔπτην; *σρεc*, *σκεπ*, Sec. 16; *στοp*, *ster*, *stra*, Sec. 17; *τλα*, *ταλ*; *τεμ*, *ταμ*, *τμα*; *τερ*, *τρα* Sec. 17; *φλεγ*, *fulg* in φλέγω, *fulgeo*. *φρυ*, *φυρ*, see above.

(2) By the change of consonants into vowels and the hardening of vowels; *ἄf*, *αῦ*, *ἄήp*, *ἄύω*, *ιαύω*; *dju*, *div*, *to gleam*, Secs. 21. 32; *γαν*, *γαf*, Sec. 20; *ι*, *to go*, thence *ja* in *ἱημι* = *jijāmi* causative, *jacio*; *λαf*, *λαν*; *λν*, *lu*, *lav*, *to scour*, *to wash*, Sec. 28; *ῡδ*, *ud*, *vad*, Sec. 21; *us*, *vas*, *εὔ*, *αὔ*, Sec. 33.

(3) By change of consonants: *ἄλκ*, *ἄρκ*, Sec. 29; *τυπ*, *tud*, Sec. 36, 4; *vi*, *βι*, Sec. 36, 3; *έρ*, *έλ* in ἔρχομαι, ἐλθεῖν; displacing the aspirate in *ταφ*, *θαπ*, *θαμβ*, Sec. 17; weakening the tenuis into a medial in *πλακ*, *πρακ*, *ῥακ*, *φρακ*, *φρικ*, Secs. 18. 20. 29. 34, 3.

(4) By strengthening the consonant or extending the root, *κτα*, *κτεν* in κτάμεναι, κτείνω; *τα*, *τεν*, *ten*; *ζν*, *ju*, *ζνγ*, *jug*, compare Sec. 36, 4; *φα*, *φεν*, Sec. 25; *φα*, *φαλ*, Sec. 25; *θε*, *fac*, Sec. 24; *στα*, *σταθ*, *stal*, *stla*, Sec. 17.

(5) By taking away the original consonant at the beginning, in *ἐχ* = *σεχ*, *ἐπ* = *σεπ*, *ἐρπ* = *σερp*, Secs. 18. 19. 23, compare *φραγ*, *ῥαγ*, *frag*, Sec. 20, *σρυ*, *ῥν*, Sec. 29.

XXXVIII. STEMS OF WORDS.

1. The root, in its further construction into a word, passes generally, but not necessarily, through the stem, as a middle stage. By certain definite extensions of the

root, which are in part nominal, and in part verbal suffixes, the stem shows a tendency towards becoming either a noun or a verb. It is therefore not indifferent to the distinction between noun and verb, but is not as yet a complete word.

Considered analytically, the stem of a word is that which remains after the removal of the nominal and verbal inflexional endings of the declensions and conjugations. Yet it is not the simple root, but has the stamp on it of either noun or verb—e.g., ὄρνυμι root ὄρ, inflexional ending μι, νν verbal suffix of the present stem, verbal stem ὀρνυ; πόσις, *drink*, root πο, σ suffix of the nominative, noun suffix σι = τι, nominal stem ποσι; φά-τι-ς.

2. The stem may however coincide with the root, on the one hand in the case of primitive or root verbs, φαμέν, ἴμεν, on the other hand in the case of nouns which have the naked root for a stem, or at least differ from it only in the quantity of the vowel, *vōx*, *dŭx*, so that a particular suffix is not necessary to the formation of the noun.

Such primitive nominal stems, which have no nominal suffix, are entirely independent of the difference between the categories of *nomina agentis* and *nomina actionis*, as they are of that between genders, *voc-s* fem. *duc-s* masc.

3. When root and stem are different the distinction between nominal and verbal stems is shown by the function of particular suffixes which find their place between the root and the inflexion. These are partly pronominal

roots, partly syllables, or even mere letters, whose meaning cannot be fixed. They take part, however, in the formation of nouns and verbs alike, as, for instance, the pronominal stem *ta* serves both to stamp the nominal stem, οἶτος, δοτός, and, in a weaker form, makes the third person singular of the verb. The suffixes *ja*, *av*, *va*, etc., appear both in verbal and nominal stems. Compare ἅγιος, δίκαιος, τιμάω = τιμαῖω, μανθάνω, ἱκανός, δαμνάω, κεδνός.

4. Besides these pure roots, many nominal stems are also direct verbal stems. In these the present stem alone takes a special stem-forming verbal suffix. This is usually *ja* in its many changes conditioned by the laws of sound. The rest of the tense-stems show the pure nominal stem. See below, Sec. 39, 2.

XXXIX. (I) VERBAL STEMS.

1. Stem or root verbs containing only the root-stem and tense-stem. This last includes the present stem, and, generally, the extension of the root by means of the reduplication which for the most part takes place in the present stem. The end of the root is strengthened by the verbal stem-suffixes, and the vowel is strengthened.

Pure root verbs in *μ*: φημί, εἶμι, εἰμί, with present reduplication ἴημι, τίθημι compare ἔθεμεν, ἴστημι compare ἔστημεν, δίδωμι compare ἔδομεν, δείκνυμι, ζεύγνυμι compare ἐζύγην.

Root verbs in *ω* with tach-vowel *ο*, *ε*: vowel forms, ἄω *I satiate*, δῶ, θύω *I sacrifice*, τιω, χράω; consonant

forms, ἔδω, λέγω, φέρω, etc.; with lengthening of the vowel or extension of the root in the present; φεύγω, τήκω, λείπω, compare *dīco*, *dūco*; δάκνω, τύπτω; suffix *ja* forming *ι* in ἐσθίω, δαίομαι; βάλλω ($\lambda\lambda = \lambda j$), κρῖνω, τείνω; $\sigma\sigma = \kappa j$ λεύσσω, πέσσω, πλήσσω, φρίσσω; $\sigma\sigma = \tau j$ λίσσομαι; $\zeta = \delta j$, γj ; ἔζομαι, ἄζω, κράζω, ῥέζω. For further details see below, under Present Stem. Compare Latin verbs in *io*, *fugio*, *rapio* in the third conjugation.

2. Nominal verbal stems, with unaltered and unformed nominal stem,—which is not a mere root. In these the present stems alone take suffix *ja*; all the other tense stems are pure nominal stems: verbs in ζω, σσω; ἐλπίζω = $\delta j\omega$, ἡλπισα — δσα, stem ἐλπιδ as in ἐλπίς, so also ἐρίζω, stem ἐριδ, φροντίζω; παίζω, παίξομαι, connected with ἔπαισα, stem παιγ in παίγνιον, παιδ in παῖς; μαστίζω — $\gamma j\omega$, stem μαστιγ, μαστίξω, ἄρπάζω, stem ἄρπαγ, Homeric future ἄρπάξω, σαλπίζω, stem σαλπιγ; $\sigma\sigma = \theta j$ in κορύσσω, κεκορυθμένος; = κj in κηρύσσω, stem κηρυκ, φυλάσσω, stem φυλακ; = τj in ἰμάσσω — $\alpha\tau j\omega$, stem ἱμαντ in ἰμάς, ἱμάντος; = χj in μειλίσσω — $\chi j\omega$, stem μειλιχ in μείλιχος. Verbs with nominal stems in ες, τελείω from — $\epsilon\sigma j\omega$, stem τελες in τέλος, so also νεικεῖω; in αν; μελαίνω — $\alpha\tau j\omega$, stem μελαν in μέλας, μελάνει Il. VII. 64; in αρ; καθαίρω — $\alpha j\omega$, stem καθαρ, τεκμαίρομαι, stem τεκμαρ; in λ; ἀγγέλλω ($\lambda\lambda = \lambda j$) stem ἀγγελ.

3. Denominatives, derived from nouns with formed nominal stems ending with a vowel. These retain the vowel stem-ending of the noun in the inflexions of the verb, as a verbal extension of a complete nominal stem.

In other forms, therefore, than the present, they exhibit, besides the root, the vowel elements which betray their nominal derivation.

The so-called contracted verbs, from the original *αἶω*, *εἶω*, *οἶω* = *ajami*, formed by the syllable or auxiliary verb, *ja*, with causative meaning, or meaning of duration, come under the head of denominatives; they are also sometimes intransitive, *τιμάω* = *τιμαῖω*, from the nominal stem *τιμα*, *φορέω*, *ὀχέω*, from the stems *φορε* *φορο*, *ὀχο*, *βιώω*, *ὀρθόω*, from the stems *βιο*, *ὀρθο*. Compare *amo* = *amajo*, *moneo* = *monejo*, *statuo* = *statujo*, nominal stem *statu*; verbs in *ω* with *ι* persistent in all tense-stems; *ιδίω* from the root *ιδ* = *σιδ* in *ἴδος*, *ἴδισα*, *κυλίω*, *μηνίω*, *κονίω* = *ιῖω* (*ῑ* = *ιῖ*), compare Latin verbs of the fourth conjugation with contracted *i* as *sapio* — *ijo*, opposed to the conjugation of *foedio*, *cupio*, etc. To this head belong also verbs in *αζω*, *οζω*, *ιζω* (so far as *ζ* is a mere extension of *j*), *νω*, *ευω*, *ονω*: *ἀγαπάζω*, *ἀρμόζω*, stem *ἀρμο* in *ἀρμός*, *ὑβρίζω*, *νεμεσίζω*, *δακρύω*, *ἰθύω*, *ἰσχύω*, *ἀριστεύω*, *κολούω* stem *κολο*, *κολοφ* = *κολονῖω*. Lastly, verbs in *αινω*, *υνω*: *λειαίνω*, *θαρσύνω*, *ἡδύνω*. Latin desideratives in *turio* from the *nomen agentis* in *tor*, *turus*: *ēsurio* = *edturio*, *parturio* from *partor*.

4. Manifold interchanges in flexion between forms of primitive and derived verbs; *κυρέω* existing by the side of *κύρω*, *ἔκνρσα*; *γηθέω*, *γέγηθα*; *δοκέω*, *ἔδοξα*; *αἶδομαι*, *αἰδέομαι*; *ἔμαθον*, *μαθήσομαι*; *ἐγενόμην*, *γενήσομαι*; *γοάω* connected with *ἔγοον*, *μηκάομαι* connected with *μέμηκα*, *μνκάομαι* connected with *μεμύκει*. Compare the Latin



fugio, cupio, video, juvo juvare by the side of *fugi, cuperem, vidi, juvi*; *lavo, lāvi, lāvavi*; *saepio, saeptus*.

XL. (2) NOMINAL STEMS, including Participle and Infinitive.

The nominal stem = the root; there is then no nominal suffix, but there is, on the contrary, a change or increase of vowel in many possible ways: *ὄψ*—*ἔεπ*, *φλόξ*—*φλεγ*, *Ζεύς*—*Δῖε* (*dju, div*), *χέρ-νιψ*—*νιβ*, *ἀπόρρωξ* root *φραγ*, *vōx*—*voc* = *ἔεπ*, *nex*—*nec*, *lēx*—*leg*, *dux*—*duc*, *pāx*—*pac*, *rēx*—*reg*.

Suffix *a, o* in A- and O- stems, to denote an agent as well as a thing: *ἀγός, ταγός, ἔργον*—*ἔεργ*, *φόρος, φορά*,—*φερ*, *φυγή*—*φυγ*, *ζυγόν*—*ζυγ*, *λοιπός*—*λιπ*, *ἄκωκή*, reduplicated,—*ακ*; *vadum* stem *vado, fīdus, jugum, coquus, vīvus, dīvus, deus* = *dēvos, deivos* from *div*; *toga*—*teg*, *advena, collēga*.

Suffix *v, u*: *ὠκός (ακ), βαρύς, πλατύς; acus*; in Latin *u*-stems are transferred to the *i* declension, *levis*—*ἐλαχός*, *brevis*—*βραχύς*, *suavis*—*ἡδύς*.—Suffix *ja*: *ἄγιος, μοῖρα* = *μορja*, *ὄσσα* = *ὄκja*; *eximius, conjugium, ingenium*; *ja* is a secondary suffix and denotes the feminine: *δίκαιος*, *ἀλήθεια* = — *σja*, *φέρουσα* = — *οντja*, *λελοιπυῖα* = — *υσja*, *μέλαινα, δότειρα*.

Suffix *va*—*vo, van* = *fo, fon*: *αἰών* = *αἰῶν*; *aevum, aetas* = *aevitas*, root *i to go*; *arvum (ar), alvus (al), vacuus*.—Suffix *φεντ*: *χαρίεις, χαρίεντος, χαρίεσσα* = — *φετja*. Suffix *φοτ*: *εἰδώς* = — *φοτς*, *λελοιπώς*.

Suffix *ma, mo, mon, mat, meno*: τιμή, θυμός, πλήμων, εἶμα = φεσματ, ὄμμα (ὄμματ); *forma, animus, sermo(n)*. Middle participles, διδόμενος compare *alumnus, ferimini* (sc. *estis*). Inf. ἔδμεναι, with locative ι as in χαμαί. Suffix *ra — la*: λαμπρός, κυδρός, λαρός, στήλη; *ruber, scala (scandla), ala, tela, telum, velum*, Sec. 17, *querela*.

Suffix *an — ana — na*: τέρην (ενς), *pecten*; ὄργανον, ἱκανός, ἡδονή. Infinitive — ναι, εἶναι, λελοιπέναι, στῆναι, δοθῆναι with locative ι, φέρειν = φερενι — εἶναι; *donum, somnus (sopnus)*. Gerund-suffix *ondo, undo, endo*.

Suffix *ta, to*, Sec. 38, 3, *tat* in adj., subst., part. pass., and verbal adjective: πολίτης; κοῖτος, *secta, noxa (cta)*; κλυτός, γνωτός, *status, potus*; νεότης (νεοτητ), *civitas*.

Suffix *tar, ter, tor, tra*, etc., in words expressing kindred and *nomina agentis*: πατήρ, φράτωρ, σωτήρ, ἴστωρ, ἱατρός, ῥήτρα; *pater, victor*. Part. fut. stem — *turo*. Denominative verbs in — *turio*, Sec. 39, 3. Feminine *nomina actionis*: *sepultura, usura*.

Suffix *ti, si, tu*, etc., in *nomina actionis*: μῆτις (μα), φάτις, φύσις, βρωτός, μνημοσύνη; *messis (met-tis), vectis, potis, compo(t)s, dos (dots), mens, superstes (stit)*; further extension in *statio, initium, justitia*; supine in *u — um*; *casus = cadtus*; further extension in *tuo — tua, mortuus, statua, tut* in *servitus, altitudo*.

Suffix *ant, ent, ont*, in part. act. pres., fut., aor.: ὦν = ἔσονται, ἐοῦσα = ἔσονται, ἰστάς = ἰσταντ, θεῖς = θεντ, λύσων = — οντ, λύσασα = — αντja; *praesens* from *esent* from the root *es*; *ient, eunt (iens, euntis)*, from the root *i*; further extension *praesentia, prudentia*.

Suffix *κα, co*: θήκη (θε), secondary φυσικός, compare

under perf. in *κα*; *cloaca*, *fecundus*, *locus*, anciently *stloc* from *stla*, *stal*, further extension from the root *sta*; secondary *civicus*, etc.

Suffix *es*, *us*, *os*: γένος (γενες), μένος, ψευδής (ες); *genus*, *corpus*, *opus* anciently *opos*, *foedus*, *robur* anciently *robūs*, *vetus* — *veteris*; masculine in *ōr* = *os*: *sopor*, etc., *aurora* = *ausosa*, change from *s* to *r* between vowels in Latin; *sedes*, *caedes*, *labes*, the other cases as in *i*-stems.

The Latin infinitive active in *ere* was originally *erē*, perhaps the shortened dative of a noun in *es*; *vehere* = *vehesei*, *fieri* anciently *fiere*, not a passive form, = *fiese*, *esse*, root *es* = *es(e)se*, *esse* root *ed* = *edse*, *ferre* = *ferse*, *velle* = *velse*, *fore* = *fuse*, *īre* = *eise*, root *i*, present stem *ī*, *ei*. Inf. perf.; *esse* is added to the perfect stem in *-i*, *peperi-sse*, *dixisse* = *dicse-esse*, the archaic *dixe* being formed by the apocopated *esse* attached to the bare root, compare *dixim*. Inf. pass. *dici* from *dicier*, by metathesis = *dicise*, *dici* dative of a noun, from the bare root *dic*, *se* perhaps a reflexive pronoun; *amari*, *amarier* = *amasise*, inf. act. in *i* instead of the original *ē*, *ei*, with the addition of the reflexive *se* (?).

The Greek infinitive middle in *σθαι* comes from the original suffix *dhjai* = *θjai*, whence *σθαι* was formed by assimilation and dissimilation.

XLI. COMPARATIVE AND SUPERLATIVE STEMS.

(a) The original comparative suffix was *jans*. The *s* disappears in Greek, and *j* becomes a vowel or is blended with the preceding consonant of the adjective-stem into

σς (ττ), ζ, Sec. 34, 3; *κάκιον*, stem of the comparative and neuter, masc. fem. *κακίων* = *κακιονς*, compare *δαίμων*, *ποιμήν*, *ἡδίων* from *ἡδύς* from the root *ἄδ*, *svad*; *μείων* from the root *μιν* *μι*, Sec. 27; *ἀρείων*, *χείρων*, Epic *χερείων*, from which *σ* has disappeared, from the stems *ἄρες*, *χερες* in *χέρης*, Sec. 23; the comparative formation in ζ from δ*j* is wanting; on the other hand *μεῖζον* = *μεγζον* with epenthetic *ι*, Sec. 9, 1, b, *ὀλίζων* = *ὀλιγζ*, Il. XVIII. 519; *ἐλάσσων*, *ἥσσω*, *βράσσων*, *πάσσων*, *βάσσων* Doric, *κρέσσων* Ionic = *κρετζ*; *θάσσων*, *μάσσων* (*μακ*, Sec. 27), *γλύσσων* connected with *γλυκίων*, *ἄσσω* = *ἀγχζον*, Sec. 34, 3. In Latin without nasal strengthening *ios* — *iōr*, neuter *ius* with original *s*; *suavior* = *svadvios*, anciently *melios*, *meliose*, *lēvior* = *legvior* (*ἐλαχύς*), *mājor* = *magior*, *pējor*, *minor* = *minior*; so too *ius* is shortened into *us* in *minus*; to *is* in *magis* = *magius*, adverb connected with *majus* = *magius* neuter, weakened *mage*; the same shortening takes place by the paring down *io iu* to *i* in the comparative suffix *is* of *satis*, *nimis*, *tantisper*; *plus* = *plo(e)jus* = *πλεῖον*, root *ple*, to fill; *plures* anciently *pleiores*, then *plerique*, the most part, where *que* = *qued* abl. of the indef. *qui* = *somehow*, a generalizing signification.

(β) The original suffix *ra*, *tara*: *ἐνεροι*, *superus*, *inferus*; *τερο* in *γλυκύτερος*, *χαριέστερος*, *μελάντερος*, *φίλτερος* by the side of *φιλαίτερος*; in adjective-stems in *ες*, *ἀληθέστερος*, so too *εὐδαιμονέστερος*; the same suffix appears in *πότερος*, Ionic *κότερος*; *uter* = *quoteros*. Compare *dexter*, *inter*, *terrestris*, *pedestris*; *sinister*, *minister*, *magister*, doubly comparative forms from *is* + *ter*.

Superlative. (α) Original suffix *ta*, doubled *tata*, το, τατο: το in ordinal numbers πρῶτος, *quartus*, *quotus*; τατο in μέσσatos, by assimilation from μεστ, μεσσότατος, μεσαίτατος, δεύτερος, τρίτατος Epic; the regular superlative to the comparative in τερο, φίλτατος to φίλτερος, by the side of φιλαίτατος; το is added to the comparative suffix *is* = *ions* compare Latin *is*, in superlatives of which the comparatives end in *ion*: κάκιστος, ἡδιστος, φίλιστος, Soph. Aj. 842, φιλίων Homeric, ὀλίγιστος, βάρδιστος Il. XXIII. 310, ἡκιστα of ἡσσων, ἡκιστος of the adverb ἡκα Ib. 531. Compare *juxta* = *jugista*, *exta*, the entrails = *exista* connected with the comparative form *exterus*, *extra*; *praesto* = *praecis-to*.

(β) The original suffix *ma*, *mata* — μο, ματο: ἑβδομος, πύματος, compare the noun-formations κάλλιμος Homeric, ὄρχαμος; *minimus*, *infimus*, *primus*, *septimus*, *summus* (*supm.*), *dextimus*, *plurimus* = *plus-imus*.

(γ) Suffix *tama*, Latin *tumo*, *timo*, *simo*: *maximus* = *magt.*, *optimus*, *veterrimus*, from — *ersimus*, *pulcherrimus*, *simillimus*, *facillimus* from — *lsimus*. Compare the adjectives *maritimus*, *finitimus*, *legitimus*; in *doctissimus*, *levissimus*, the superlative ending *simus* is added to the comparative stem *is* from *ius*.

XLII. STEMS OF THE NUMERALS.

Cardinal numbers. 1. εἷς = *ēvs*, Doric ἧς, stem and neuter ἔν (οὐδέν) = *ēm* in ἄμα = the original *sam* in *semel*, *simplex*, *simul*, *singuli*, compare ἄπαξ (*ā* = *sa*), Secs. 27. 30, 2. Feminine μία, μῑās = *σμία* = *samja*, *ja* being the

feminine suffix ; on the other hand the Homeric *ἱα*, dative masculine *ἱῶ*, so too *οἶος*, *unus*, stem *οι-νο* with suffix *να*, Gothic *ains* from the demonstrative *i*. 2. *δύο* from *dva*, Sec. 21. 3. Stem *τρι*, *tri*, *τρῆς*, *tres* ; Gothic *threis*, H. G. *drei*, E. *three*. 4. *τέσσαρες*, *quatuor*. 5. *πέντε*, *quinque*, Sec. 19, 2. 4. 6. *ἕξ*, *sex*. 7. *ἐπτά*, *septem*, Sec. 30, 2, compare Sec. 35, 3. 8. *ὀκτώ*, *octo*, Gothic *ahtau* ; *ὄγδοος* = *ὀγδοφος*, *octavus*. 9. *ἐννέα*, *novem*, Sec. 9, 5. 10. *δέκα*, *decem*, Secs. 21. 35, from an original *dakan* = *dva-kan* = 2×5 (?). *ἑκαοσι*, Sec. 9, 5. Sec. 16. Sec. 34, 2. *viginti* = *dviginti*, *dvidecenti*. Fundamental form *dvidakati* = 2×10 . *ἐκατόν*, Sec. 16. The same syllable *ko* = *ka*, shortened from *δέκα*, has the meaning 10 in the tens, but in the hundreds, where it springs from *ἐκατόν*, it has that of 100. There is no common Graeco-Italian word for 1000 ; *χίλιοι* and *mille* are both obscure.

Ordinals have generally the superlative forms, Sec. 41. The comparative suffix *τερο* is kept in *δεύτερος* ; *ὄγδοος* see above, with weakening of the tenuis to a medial as in *ἑβδομος*.

PART III.

WORD-FORMATION OR INFLEXION.

XLIII. THE WORD.

The stem is not, like the root, an abstract of indefinite meaning, neither is it a complete and finished assemblage of sounds which can express a concrete conception, or a judgment including the synthesis of subject and predicate. It is made into a true word by the addition of the elements of relation—the inflexional endings.

Every real word expresses the idea of a thing existing by itself in a state of rest, or of an action taking place in time. It contains either an appellation or an assertion, a conception or a judgment, is either a noun, or name-word, or else a verb, or time-word. It has, therefore, besides the vague nominal or verbal suffixes which form the stem, nominal or verbal inflexion-endings.

A nominal inflexion expresses an attributive relation to the noun, and is the case-ending; a verbal inflexion expresses a predicative relation, betokening the subject of an action, and is the personal ending—along with the tense-stem and mood-element, Secs. 55-57: these two are the factors of word-formation.

These inflexional suffixes, both of the noun and of the

verb, contain original pronominal or demonstrative forms and stems.

Adverbs, particles, and prepositions are also originally case or verbal forms.

Interjections, (so far as they are not verbal forms, embodying an imperative), and vocatives—the mere noun-stem in form of an interjection—are not real words. They express mere indefinite feelings and emotions without concrete relations, and have therefore no suffixes.

I. THE NOMINAL INFLEXION. DECLENSION.

XLIV. ELEMENTS.

The inflexional endings of the noun denote more distinctly a thing which the nominal stem describes indefinitely.

1. According to its sex as a person, or as a thing which may be regarded according to the analogy of the difference of sex—a tree for instance, as a fruit-bearing thing, presents itself to the mind as female,—or expressly as wholly destitute of sex, that is neuter.

2. According to number as unity or plurality.

3. According to its relation to an action or motion expressed by the verb.

The inflexions consist of signs of gender, case, and number. The dual is a variety of the plural. The vocative is not a case, but a mere nominal stem, and in the neuter and plural = the nominative. No alteration of the root or stem takes place in the inflexions of the

noun, except such as the laws of sound demand when the inflexional suffix is added to the stem.

The declensions of the pronouns show essentially weaker forms than those of the nouns.

XLV. SIGNS OF GENDER.

Gender, originally not denoted by any variation of sound, is designated by secondary expedients in consonant stems, in diphthong stems, and in *i* and *u* (*v*) stems, —e.g., ὁ πατήρ, ἡ μήτηρ, ἡ ναῦς, ἡ πόλις, ὁ νέκυσ. In stems in the original *a*, the so-called O and A-stems, where Latin *u* = *o*, *a* is lengthened in the feminine to *ā*, *ā*, η, Sec. 7, ἀδελφός, ἀδελφή; in Latin also the final *a* of the feminine stem was originally long, compare *āi arum*, *ābus*.

Forms also of the A-stems do duty as masculines with lengthened endings, as πολίτης. In Latin the final *s* is dropped as in the ancient form *parricidas*, and the original *ā* is shortened in *advena*, *terrigena* as in ἱππότᾱ from ἱππότης. On the other hand the A-stem is used as feminine without the stem (in *o* or *u*) being lengthened, as ὁδός, ἄλοχος; *humus*, *mālus*.

Certain case-suffixes are appropriated to the expression of only a particular gender. The genitive singular masculine and neuter of the A and O-stems—the so-called second declension—has the original ending *ojo*, Sec. 47, while the feminine has the simple genitive suffix *s*. The neuter differs from the masculine and feminine in

the singular by the want of the nominative form, instead of which it employs either the form of the accusative, or the bare stem, *damnum*, δένδρον, μέθυ; though in Latin many neuters take the *s* of the nominative, as *vulgus*, *virus*, and it takes the suffix *a*, originally *ā*, in the nominative and accusative plural; the rest of the cases have similar forms for the neuter and masculine. In the declension of pronouns the neuter has the original suffix *t*, the masculine and feminine *s*, τι, *quid* = *kit*; τις, *quis* = *κis*. Certain stem forms are fixed also for the feminine; thus stems in *ja*, φέρουσα = φερонтја, δότευρα —εργја by the side of the older stem-form used as masculine δοτήρ = *δοτερς*, ἡδεΐα feminine of ἡδύς; in *id* in δεσπότις, αἰλητρίς like the masculine δεσπότης, αἰλητήρ; compare also πρόφρων, πρόφρασσα; the Latin stem in *ic* in *victrix* with the masculine *victor*.

XLVI. DECLENSIONS

Difference of declension is conditioned by the final sound of the nominal stem. This is either a consonant or a vowel, which latter may be divided into hard vowel sounds, in *a*, *o*; weak vowel sounds, in *i*, *u*; and diphthongal, in *av*, *ev*, *ov*.

Consonant stems: 1. Consisting of a mere root, or unformed nominal stem, without any stem-forming suffix; ὄψ, *vox*, root ὀπ, *voc*, κῆρυξ, stem πηουκ, πούς = ποδς, with compensatory lengthening, *phēs* stem *ped*, ἐλπίς, stem ἐλπιδ, θήρ. 2. With stem-suffix originally *as*, Greek *os*, *es*, Latin

os, us, is ; μένος, δυσμενής ; *genus* genitive *generis* = *genesis*, *genesos, cinis, arbos (r), vetus* ; in Greek the *s* at the end of a stem is thrown away before the case-suffix which begins with a vowel ; *s* is original and belongs to the stem also in the fifth so-called Latin declension, *dies, spes*, genitive *diei* = *diesis*, it disappears in the oblique cases ; for the transition in the so-called E-declension, Sec. 47. 3. With stem-suffix in *n* ; ποιμήν — εν, τέκτων — ον, δαίμων ; *nomen, sermo (n), homo* stem *homen*. 4. With stem-suffix in dentals οντ, *ent*, φοτ, ατ, αδ ; γέρων, φέρων, εἰδώς = φοτς, σῶμα, λαμπάς ; *ferens*. 5. With stem-suffix in *r* in δοτήρ, πατήρ (ερ), ῥήτωρ, *dator, pater*.

Vowel-stems : 1. A and O-stems, capable of no transition into the consonant declensions ; ἵππος, ζυγόν ; *equus* = *equ(o)s, jugum* = *jugo(m)* ; feminine χώρα, *equa*. 2. Weak vowel J and U-stems and diphthongal stems, passing into the consonantal declensions, in single case-forms by changing vowels into consonants ; φύσις, πόλις, *avis, ovīs* ; νέκυς, ὀφρύς, σῦς ; *fructus* ; ναῦς, βασιλεύς, βούς,

XLVII. CASE-ENDINGS.

1. *The nominative, accusative, and vocative, both of the singular and plural*, are cases of the subject and immediate object, of the starting point and goal of an action or motion. These cases are identical in the neuter. Suffix *s* or *m*, or none.

The nominative singular masculine and feminine suffix *s*, the sign of personality, of something conceived, as living,

is the relic of a pronominal root *sa*, in Greek σ , η . When this falls away the vowel is long by compensation, Sec. 9, 2, *πατήρ* from *πατερς*. It is lost in feminine A-stems, *χώρα*—compare masculine *ἱππότης*—*a* is shortened after consonants, *γλῶσσα*. Latin *materia* coexists with the form *materie-s*; *pēs* = *peds*, *mors* = *morts*, root *mor* suffix *ti*; *s* disappears after *r* and *l*, *acer* by the side of *acris*, *vigil(s)*.

Nominative plural masculine and feminine, — *ες*, originally *as*; *δυσμενείς* — *εςες*, *γλυκεῖς* = *εφες*, *πόλιες* Ionic, *πόλεις* from *πολεῖες*, lengthened in the Homeric *πόλῃες*, *νῆες* = *ναφες*. The weaker form in O and A-stems, *ἵπποι*, *χῶραι*, *οἱ*, *αἱ*, the older *τοί*, *ταί*, compare *τῶς*, where the stem widened by *j*, with suffix *as*, is cut down to *οι*, *αι*. In Latin *hostes*, *hostīs*, *hosties* compare *πόλιες*, *hosteis*, *πόλεις*; according to the analogy of the J-stems, also all consonant stems, *vocēs* from *vociēs*; *fructūs* from *fructues*, compare *νέκυνες*. O and A-stems are analogous to the Greek; *equi* from *equei*, *equoi* (*oe*), *equois*; *equae*, anciently *equai*, from *equais*; anciently *magistreis*, *filis* from *filieis*; in the so-called fifth declension *dies*, *species* = *dieses*.

Dual nominative and accusative *ε*, originally *a*, a weakening of the plural form — *as*; *δυσμενῆ* from — *εσε*, *πόλεε* from — *εφε*. In O and A-stems the original *a* of the case-endings coalesces with *ο*, *a* of the stem-ending into *ω*, *ᾱ*, *ἵππω*, *ζυγώ*, *χώρα*. The only Latin duals are *duo*, *ambo*, compare *octo*.

Accusative singular originally — *am*, or, when the stem ends in a vowel, *m*; *ν* occurs instead of *m* according to the Greek law of sound, Sec. 35, and *a* when the stem

ends in a consonant ; πατέρα by casting off the ν, for α is a tach-vowel, = *pataram*. Neuters have no case-suffix, φέρον = φερONT. Ναὺν from the vowel stem ναυ, Homeric νῆφα from the consonant stem ναφ ; πόλιν vowel stem, by the side of the Epic πόλῃα from πολεῖα, consonant stem, compare νηός, πόλῃος, and Sec. 9, 2 ; εὐρέα Homeric, stem εὐρύν.

S of the accusative plural masculine and feminine is affixed to the accusative singular. Neuters have α. Νῆφας, ναῦς (ναυνς) ; πόλεις = πολεῖας, Homeric πόλῃας, compare from πολὺς the Homeric πολέας = πολεφας, by the side of πολλούς, Ionic πόλῃας = ανς, *ams* ; ἵππους, Doric ως, = ονς, τοὺς = τονς, χώρας = ανς, *fructūs* = *fructuns*, *equos* = *equons*, *equas* = *equans*.

The vocative, as distinguished from the nominative, has no suffix, and leaves the stem unaltered : εὐμενές, δαῖμον, αἰῶτερ, πόλι, πρέαβν, ναῦ ; yet in consonant-stems the nominative often serves as vocative, φύλαξ ; on the other hand, the ending of the stem is thrown away in accordance with the laws of endings, in ἄνα = ἀνακτ, παῖ = παιδ ; in O-stems the original ᾱ is weakened into ε, ἵππε ; χώρα, γλῶσσα are the same as the nominative ; νύμφη, vocative νύμφᾱ Homeric ; in masculines in ης, ᾱ : πολῖτα, δέσποτα.

2. The other cases denote partly the relations between one object and another, expressed by a noun, partly an attachment of one object to another by motion from the one to the other. These endings were originally local in their signification, and often interchanged their functions.

The ending of the *genitive singular* was originally *as*,

Greek *os*, often lengthened into *ωs* in J- and U-stems treated as consonant-stems, and in diphthong-stems, in consequence of the disappearance of *j* and *f* and the change of quantity thence resulting; *ναῦs*, consonant-stem *ναf*, genitive *ναfos*, *ναός* Doric, *νηός* Epic Ionic, *νεώς* Attic, so Epic *βασιλῆος*, Attic *βασιλέως*, *ἄστεως* = *ἄστεφος*, on the other hand *γλυκέος* = — *εφος*; *πόλις* is treated as vowel-stem, *πόλιος* Ionic, but was originally a consonant-stem, *πολεjos*, thence *πόλῃος* Homeric, *πόλεως* Attic; in *χώρας* the *a* of the genitive coalesces with the ending of the stem. The genitive of the O-stems ended originally in *oojo* (*ojos*?) thence *ojō*, Homeric *ἵπποιο*, Attic *ἵππου*, from *ἵπποο*; compare Il. II. 325, Od. I. 70, *ῥο* = *οῦ* more correct than *ῥου*, compare *Πετεῶο* Il. IV. 327; *πολίτου* according to the analogy of the O-stems instead of the original *ao* (*ajō*, *asjo*), Homeric — *ao*, along with — *εω*, where there is a change of quantity, whence *ω*. The Latin *os*,—archaic in *senatuos*, becomes — *is*, *us*, as *generis* = *genesos*, *fructus* = *fructuos*, by the side of the archaic *fructuis*, *senatuis*, also *senati* according to the analogy of the O-stems. The terminal *s* disappears in O- and A-stems: *equi* from *equeis*, *equois* compare *illius*, *istiis*; the ancient *filiai*, *aquai*, *familiai* modify *ai* into *ae*, as *aquae*; there was an old form with *s*; *familias*, *terras*. Just as *s* of the stem disappears, so also does *s*, in genitive forms in *ei* of the so-called 5th declension, as *diei* by the side of the old form *dies* as a genitive, instead of *diesis*; in the so-called E-declension the transition into *ie* — *ies* (*materies*) exists by the side of the form *ia*; *materiei* compare the old *familiai*.

The original form of the *genitive plural* was *am, sam*, Greek *ων*, in A-stems originally *σων*, *χωρῶν* = *χωρασων*; old Greek and Homeric *αων*, *εων*, Doric *ἄν*; Latin *um* in consonant-stems, *generum* = *genes-um*, *ium* from the original J-stems, as well as those treated as such; in O- and A-stems, *rum* from *som*, *equarum* = *asum*, by the side of forms without *s* as *agricolūm*.

The dative and locative singular. The dative proper, the case of the more remote object, betokens a relation of interest, the entrance of a person or thing into the sphere of operation of an action; the locative betokens rest in a place. In Greek the two cases have for the most part coalesced, since the dative relation was originally considered also as locative. The dative ending was originally *ai, ei*, the locative ending was the demonstrative root *i*; *πατρί* with short *ι* being locative, *patri* dative. The true Greek dative is found only in O- and A-stems *ἱππῶ* = *ἱππῶι*, *χώρᾱ* = *ᾱι*, from *aai*. The former have special locative-forms as adverbs, *οἴκοι*, *ποῖ*, *οἷ*; the single example of a locative feminine is *χαμαί*. The difference of meaning between the pronominal locative "whither" and the nominal locative "where," is not original. True Latin datives are *senatui* = *uei*, *patri* old form *patrei*, *diēi* connected with *diē* = *diesei*; O- and A-stems *equo* = *equoi*, old form *populoi*, *cui* = *quoi*, *equae* = *equāi*. The only Latin locative in *i* used adverbially coalesces with the genitive in O- and A-stems, in consequence of the disappearance of the *s* of the genitive ending as *humi*, *domi*, *belli*, *Corinθi* (*i* = *ei* = *οι*, compare *οἴκοι*); *Romae* locative = *Romai*, as *χαμαί*, only occasionally = genitive

originally *Romais*; further adverbial locative forms are *heri, ruri, peregri, postri-diē* from *diei, temperi*. By permutation of *e* and *i* the Latin locative has been confused with the ablative form which has lost its original *d*; *rure* = *rured*, an ablative like *peregre*.

The ablative singular originally ended in *at, t*. In Greek this termination is retained only in the endings of adverbs in — *ως, ταχέως, πάντως, ὧς, τῶς, πῶς*, Ionic *κῶς*, originally *kat*. The Latin *d* is archaic in *senatud, hosteid, sententiad*, but was cast away at a later period, and the ablative in consonant-stems thenceforward ended in *ē*. The Latin adverbs in *ē* were originally ablatives, compare the archaic adverb *facillumed*; *ante* = *antid* in *antidhac*, *post* = *postid* in *postidea*, thence *postea, extrā, suprā, itā* = *itad*, etc., enclitic *que* in *quisque, usque, plerisque*, etc. from *qued* the ablative singular of the indefinite pronoun *qui* with the meaning *somehow, in which way, thence*. Sec. 41, 1.

Locative dative plural. Greek in *σσι (σφι), σι: πόδεσσι, ποσσί, ποσί (ποδοσι), πόλισι* Ionic, *πολίεσσι* Homeric. O- and A-stems were lengthened by the phonetic or resonant *ι*, Sec. 9, 3: *ἵπποισι, χώραισι*, thence *ἵπποις, χώραις*, Epic and Ionic *ησι, ης* (*η* = originally *ā*); old forms without this *ι* are *Ὀλυμπιάσι, Ἀθήνησι, θύρασι*. This case does not exist in Latin.

The ablative singular and plural suffix *φι(v)* = *bhi*, a descriptive case formation, with local, copulative, instrumental, or ablative function, for singular and plural, *ὄχσεφι, ναῦφι, Ἰλιόφιν, βίηφι, κλισίηφι, θεόφιν*; Doric and Homeric *τεῖν* = *τεφιν*, compare *tibi*. Latin pronoun

dative singular *tibi, sibi; ibi* locative of the demonstrative *i, alibi, utrobi; mihi = mibhi*. Dative and ablative plural in *bos, bus*, with the *s* of the plural, anciently *bios, fies*, as in *λυκριφίς*, Sec. 28; *acubus, ovibus, ambobus; nobis, vobis* are weaker but original forms. In A- and O-stems *b* disappears; *equis* from — *eis, ois (obios); mensis — eis, ais (abios)*; compare *deabus, filiabus*, and *rēbus, diēbus*. Closely connected with this case are the

Greek dative and genitive dual. The suffix *φιν*, with *φ* lost and contracted to *οιν, αιν* from *οφιν, αφιν*, in O- and A-stems, passes into the other stems; *ποδοῖν, πολέοιν*.

XLVIII. PRONOUNS AND PRONOMINAL DECLENSION.

1. Personal and reflexive pronouns without difference of gender: *ἐγώ, ἐγών*; Skr. *aham; ego*; Gothic *ik*; thoroughly independent of and different from *ma*, the 1st personal verbal pronoun; *σύ*, weakened from *τύ*, Doric, coexisting with *τύνη*; *tu* stem *tva*; compare the possessive *τεός*. The accusative forms *ἐμέ, μέ, σέ*, Doric *τέ (= τφε)*, reflexive *ἐ*, Homeric *ἐέ*, Æolic *φέ (= σφε)*, Latin *se = sve*, with no sign of case, show the real stems of these pronouns, *ma, tva, sva*. Locative and dative *ἐμοί, σοί (= τφοι)*; *οἷ*, compare *οἶκοι*; Doric *ἐμίν*, Homeric *τεῖν*, Æolic *ἐν*, from *ἐμεφιν*, etc., compare *mihi, tibi, sibi*, ablative *me, te, se = med, ted, sed* also used as accusative. Genitive *ἐμείο, —* from original case-suffix *σjo*,—*ἐμέο, ἐμεῦ, ἐμοῦ; τεοῖο, σεῖο, σέο, σεῦ, σου; εἰο, εἶο, εἶν, οῦ* (for *σφεο*), without elision and hiatus, as in Od. IX. 398, making the foregoing syllable

long by position, so also the possessive ὅς; *mei, tui, sui*, genitive of the personal pronoun. Plural nominative Æolic ἄμμες, ὕμμες, accusative ἄμμε like the singular; ἡμεῖς, ἡμᾶς, etc., treated as J-stems. The dative ἡμῖν has arisen from the locative — φιν. *Nobis* with δι, as in *tibi*, and the s of the plural. Dual nominative and accusative νόω from the stem νο, νῶι according to the analogy of the dative; σφώ, σφῶι from τρω; σφωέ; genitive and dative νῶω, νῶν; σφῶω, σφῶν; σφωῖν with suffix φι.

The possessive pronoun is derived from the stem of the personal pronoun: 2nd person Doric and Epic τεός = τφος, *tuius*, in Ionic Attic weakened into σός. 3rd person ὅς, ἑός Homeric = σφος, hardened into σφός Doric, *suus*, makes the preceding syllable long by position as οῖ, Il. VIII. 406. XVI. 542. Plural ἄμός, ὕμός, σφός, Homeric Doric, ἄμμος, ὕμμος Æolic.

2. Demonstrative pronouns with difference of gender: ὁ, in later language, and sometimes in Homer, employed as an article, = *sa*, see for the rough breathing, Sec. 30. 2, instead of σος the final s of the nominative masculine being dropped; ἡ = *sā*; neuter τό = *tot*, the τ at the end of the word having disappeared as in τί, compare *istud, illud*. The rest of the case-forms ending in a dental are derived from the pronoun-stem *ta*, etymologically the same as the German article *der, den*; besides οἱ, αἱ we find τοί, ταί, older forms, Doric and also Homeric; τοῖς = *tons*; from both forms ὅδε, τόδε, τοῖςδεσι. Homeric, with inorganic case-ending. The pronominal stem *ta*, or in its less common form *sa*, is the foundation

of the article, and both stems are the basis of the demonstrative forms. The forms of the article beginning with τ were used in the Ionic dialect, and by the Attic tragedians, who also employed this form as a relative, to avoid a hiatus. Different from this is the

Relative pronoun $\delta\varsigma$, η , δ = *jas*, *jā*, *jat* from the pronoun *ja*, root *i*; this also was originally demonstrative, compare the Attic η δ' $\delta\varsigma$, $\kappa\alpha\iota$ $\delta\varsigma$ $\epsilon\phi\eta$, $\delta\varsigma$ $\kappa\alpha\iota$ $\delta\varsigma$. Compare Sec. 32, 3.

The indefinite interrogative is $\tau\acute{\iota}\varsigma$ = $\kappa\iota\varsigma$, $\tau\acute{\iota}$ = *kit*, *quis*, *quid*, Sec. 19, 4; the same *d* which = *t*, belonging to the pronoun-stem *ta*, is found in other neuter forms of the declension of pronouns: *id*, *illud*, *quod*, *aliud* = $\alpha\lambda\lambda\omicron(\tau)$; *qui* ablative = *quo* compare *alioqui*, *nequiquam*.

The Latin demonstrative *is* comes from the pronominal stem *i*; *ea*, *ejus*, arise from the modification of *i* into *e* before *a*, *o*, *u*, compare *eo*, *eam*, *eunt*, from the verbal root *i*, *deus* from the root *div*, coexisting with *dius* = $\delta\acute{\iota}\omicron\varsigma$. *Hic* from the pronominal stem *ho*, suffix *i* and *ce*; if *ne* follows the *e* is changed into *i*, *hicine*, *hoc* = *hodce*; *haec*, *quae* feminine and neuter = *haice*, *quai* with the demonstrative pronoun *i*, thence without it *aliqua*, *si qua*, compare *antehac*. The archaic *ibus*, *hibus* = *eis*, *his*; *hoc* archaic for *huc*.

XLIX. ADVERBS AND PREPOSITIONS.

1. Adverbs are nominal or rather pronominal word forms. They are employed originally to designate relations of place, and afterwards those of manner and time. They

are undeclined, formed partly from pronominal stems and partly from those of nouns both substantive and adjective. They are petrified case-forms, standing alone, and for the most part declare themselves by their endings as definite cases of nouns or pronouns. E.g., pronominal adverbs from the stem of the demonstrative δ , $\tau\acute{o}$, of the relative $\delta\acute{o}s$, of the indefinite $\pi\omicron\varsigma$ = Ionic $\kappa\omicron\varsigma$, are $\omega\delta\epsilon$, $\acute{\omega}s$, $\tau\acute{\omega}s$, $\pi\omega s$, ablative forms; $\omicron\iota$, $\pi\omicron\iota$ locative;—compare the Homeric adverbs $\acute{\alpha}\nu\iota\delta\rho\omega\tau\acute{\iota}$, $\acute{\alpha}\nu\alpha\iota\mu\omega\tau\acute{\iota}$, etc., with locative ending $\tau\iota$ used in a modal or instrumental signification— $\omicron\upsilon$, $\pi\omicron\upsilon$ genitive, with local suffix $\theta\iota$, $\theta\epsilon\nu$, $\delta\epsilon$; the ending of the temporal adverb $\delta\tau\epsilon$, $\tau\acute{o}\tau\epsilon$, $\pi\acute{o}\tau\epsilon$, Doric $\delta\kappa\alpha$, etc., is identical with $\tau\epsilon$, *que*; compare $\kappa\alpha\acute{\iota}$, Secs. 16. 19. For adjectival adverbs in ωs , ω , Latin in $\bar{e}$ (*ed*), see, under the ablative, Sec. 47. For substantive adverbs with local suffix ι , see under the locative, $\theta\iota$, $\theta\epsilon\nu$, $\delta\epsilon$ Sec. 47. Modal suffix α , η in the pronominal η , $\pi\eta$, $\tau\eta$, $\pi\acute{\alpha}\nu\tau\eta$; α in $\acute{\alpha}\mu\alpha$, $\mu\acute{\alpha}\lambda\alpha$, $\tau\acute{\alpha}\chi\alpha$, etc. Many adverbs are identical with the accusative singular and plural of neuter adjectives.

2. Prepositions are in fact adverbs, and as such contain case-elements. In Homer they are still used in their original adverbial character; they were afterwards united to verbs and nouns as prefixes, and finally came to govern certain cases. E.g., $\acute{\epsilon}\pi\acute{\iota}$, $\acute{\epsilon}\nu\acute{\iota}$, $\acute{\alpha}\nu\tau\acute{\iota}$, $\acute{\alpha}\mu\phi\acute{\iota}$, $\pi\alpha\rho\acute{\alpha}$; *prae* = *prai* are locatives; *pro* = *prod*, *ante(d)*, *apud* are ablatives; $\pi\acute{\alpha}\rho\omicron\varsigma$ is a genitive; compare *coelitus*, *antiquitus*; for the so-called instrumental adverb in α , as $\acute{\alpha}\nu\acute{\alpha}$, $\pi\alpha\rho\acute{\alpha}$, $\acute{\alpha}\nu\tau\alpha$, see above under Adverbs.

3. The whole of the many forms of the infinitive, Sec. 40, are also to be considered as petrified forms of *Nomina actionis* (locative or dative), just as participles and verbal adjectives are *Nomina agentis*, or declinable nominal-forms from verbal-stems with the nominal stem-suffix added.

II.

THE INFLEXION OF VERBS. CONJUGATIONS.

L. ELEMENTS.

1. The idea of action or motion is expressed only in an abstract form by the verbal stem. It receives its closer definition and formation into a word,

a. Through the reference to definite persons, as subjects of the action or motion ; this is expressed in the personal endings.

β. Through the indication of the mode in which something is done or has happened, in its relation to fact either as what has really occurred, or as what is merely thought of and willed ; this is expressed in the mood-elements. The indicative is the objective mood, without special mood-elements. The subjective moods are the conjunctive and optative with special mood-suffixes.

γ. Through the relation of the action to a definite time, as well as its indication as lasting, momentary, and finished—the last difference is thoroughly carried out in Greek only ; this is expressed in the tense-stems.

2. Genus Verbi. The action which is expressed by the verbal stem may regard the subject which is designated in the personal ending as a more immediate or more distant object.

This reflexion of the action on the subject, which thereby bears a receptive passive relation to the action, is denoted by the middle forms of inflexion, whose reflex signification is shown by more extended and stronger person-endings. They differ from the verbal forms of the active, which express an exclusively active relation of the subject to an action.

But since this mixed, middle, partly active, partly passive relation of the subject to the action may be also considered as exclusively passive, the middle verbal form serves secondarily also to express the passive—*medio-passivum*.

3. The forms of the passive show a tendency towards new formations. This occurs primarily in Greek, where only the compound aorists and the future passive are peculiar forms of passive meaning differing from the middle, but also in Latin, which has no original middle voice. In Latin, the passive forms,—which, in the so-called deponents, simply perform the office of a middle voice,—are produced by affixing the reflexive pronoun to the active personal endings, and by the passage of the reflexive into the passive signification.

1. PERSONAL ENDINGS.

LI. PRIMARY AND SECONDARY PERSONAL ENDINGS.

AUGMENT. IMPERATIVE.

1. The synthesis of a subject with a predicate, which is essential to a verb in order to give it predicative force, is accomplished by the amalgamation of the pronominal stem, serving as a subject, with the predicate, a stem implying meaning in its simplest verbal form. Weakened forms of the pronominal stems in the three persons of the singular without reference to gender, appear in the personal endings as enclitics at the end of the verbal stems. By means of the accent of the word they make up with the root or the verbal stem the unit called a word. They are *ma*, compare ἐμέ accusative of the personal pronoun; *tva*, compare *tu*, Doric τύ, σύ; *ta*, compare το, stem of the article.

Root *as*, to be, *mi* weakened from *ma*, *I*, *as-mi*, = being *I*, *I am*. Root *da*, to give, pronominal stem *ta*, that, he; *da-ta*, giving he, he gives; *da-tva*, giving thou, thou givest. Weakened form of the pronoun in the personal endings; *mi*, *si*, *ti*. The endings of the plural consist of a combination of two pronouns of the singular. Personal endings: 1st plural *masi* = *matvi*, *I and thou* = *we*; 2nd plural *tvasi* = *tvatvi*, *thou and thou* = *ye*; 3rd plural *anti*, *nti*, either a strengthened form of *ti*, or compounded with the pronominal stem *an* = *he and he*, *they*. E.g. *asmasi*, *we are*; *astasi*, *ye are*; *asanti*, *they are*; compare the doubling of the pronominal stems in another, that is to say, a constructive—see Sec. 53—sense in the personal endings of the middle voice.

These so-called primary personal endings are found in the tense-stems of the present, future, and perfect (in this last case the primary personal ending is smoothed away in consequence of the reduplication), and in all forms of the conjunctive.

2. A further shortening and weakening of the personal endings takes place under the influence of the augment in the historic tenses—imperfect, aorist etc.—and in all the forms of the optative. These are the so-called secondary personal endings—1st pers. *mi* to *m*, *ν* according to the Greek phonetic law, 2nd pers. *σι* to *s*, 3rd pers. to *τ*, which disappears at the end of a word; 3rd pers. plural *ν* from *ντι*.

The augment consists of the syllable *a*, in Greek *ε*, a pronominal stem having reference to distance. It is prefixed to the root as a particle relating to past time, and thus differs from the suffixes of the personal endings which denote the subject. It also coalesces with the following word into one sound. It differs in meaning from the reduplication of the perfect because it does not, like the reduplication, denote completion, but past time only, it differs also in its looser relation to the tense-stem. Thus it does not, like the reduplication, coalesce with the whole tense-stem, but only with the indicative, and, as in Homer, does not necessarily attach itself even to this. The original form of the verb with augment is as follows,—root *da*, *adam*, *adadam*, instead of *adami*, *adaami*. Greek *ἔδιδων* instead of *ἐδιδωμι*.

On syllabic and temporal augment see the grammars. A syllabic augment where there is a vowel at the begin-



ning of the root, and a temporal augment where this is lengthened to $\epsilon\iota$ instead of η , point to a rejected consonant at the beginning of the root f , j , σ : examples, Sec. 11, 2; Sec. 21 $\iota\delta$ — $f\iota\delta$; Sec. 20, $f\alpha\gamma$, $f\epsilon\gamma$; Sec. 23, $\epsilon\chi$, $\sigma\epsilon\chi$; Sec. 30, 2, Sec. 31, Sec. 32, 3, ϵ ; a syllabic augment with doubling of the ρ , points to a rejected f or σ before ρ , $f\rho\alpha\gamma$ Sec. 20, $\rho\nu$, $\sigma\rho\nu$ Secs. 29. 30, 3.

3. The imperative, a verbal interjection (by which the subject expressed in the personal terminations is to be considered as a vocative), is in the 2nd pers. singular of many primary verbs in $-\mu\iota$ characterized by aspiration of the personal termination, $\theta\iota$ from $dhva = tva$, compare θ in 2nd pers. singular; see below for the remaining personal terminations of the imperative.

LII. PERSONAL ENDINGS OF THE ACTIVE.

Here we have first to consider the difference of the inflexional forms, in the present and the strong aorist. These differences exist between (α) the primitive verbs, the so-called verbs in $\mu\iota$, which have, with the exception of $\epsilon\iota\mu\iota = \epsilon\sigma\mu\iota$ and $\eta\mu\iota = \eta\sigma\mu\iota$, exclusively a vowel root-ending and a monosyllabic original stem (to which also as far as regards the inflexion of the present stem belong verbs with a stem-suffix $\nu\nu$ added to the bare stem or to the root, as $\delta\epsilon\acute{\iota}\kappa\nu\nu\mu\iota$, $\zeta\epsilon\acute{\upsilon}\gamma\nu\nu\mu\iota$), and which affix the personal ending immediately to the root, and (β) verbs ending in the 1st sing. in ω , which insert between the root and the personal ending a tach-vowel, originally α in the

Greek, uniformly interchangeable with the vowels *ε* and *ο* (1st sing. *ω*, see below). The latter class of verbs, by far the most numerous, contains, besides consonantal root-verbs in *ω*, as *ἄγω*, *πλέκω*, *βλέπω*, *πέτομαι*, *μένω*, also a considerable number of roots with vowel-endings, so-called 'verba pura' as *τίω*, *δύω*, *λύω*, *θύω*, *φύω*, in which however the irregularities in the quantity for the most part, or the length of the root-vowel in the present, even though it only occurs sporadically, indicate the loss of a *j* which served to lengthen the present, and has fallen out from its place between the vowel root-ending and the person-endings: *φύω*, Æolic *φνίω*, so *θύω* = *θυιω* compare *λῦ'ει* Od. VII. 74. Other verbs in *-ω* whose roots end in vowels, as *ζέω*, *νέομαι*, *τρέω*, see Secs. 32. 26, imply the loss of *σ*; or *Ϝ*, *λάε*, *φάε*, Secs. 25. 28, and appear as consonant-root verbs in *ω* with spirant rejected. So while the existence of original present forms of primitive verbs in *ω* with vowel root-ending but without any lengthening of the present is doubtful, the existence of the so-called tach-vowels, as phonetic intermediaries between consonant root-endings and personal endings, which later on were introduced in the case of stems with vowel-endings, must be regarded as certain. Forms such as *est*, *volt*, *fers*, *ferris*, see below, are the remnant of an inflexion without tach-vowels in Latin.

The primary form of the 1st person singular is *μι*, from the original *ma*. The original form from the root *as* is *asmι*, thence *εἰμί* = *έσμι*, Æolic *ἔμμι*; in *εἶμι* the vowel is strengthened from the root *ι*; Æolic *μι* also appears in the contracted conjugation *φίλημι*, *ὄρημι*. The *υι* disappears after

a consonant root-ending, or after a tach-vowel (*a-e-o*) which is added to the verb-stem, *τιμαj* in *τιμάω* = *τιμαjω*, and the tach-vowel itself is intensified into *ω*; *λέγω* = *legomi* instead of *legmi*, Latin *lego*. Perfect — *a* from *αμ*, *λέλοιπα* from *λελοιπαμ*, compare the Æolic *φοῖδημι*. In the conjunctive the original personal endings are retained in the Homeric forms *ἴδωμι* Il. XXII. 450 *ἴδωμαι*(?), *ἐθέλωμι*, *εἵπωμι*. In the optative, which elsewhere shows a secondary personal ending, the 1st singular primary form in *μ* has been introduced, as *φέροιμι*, older forms with secondary ending *τρέφοιν*, etc.; *ν* on the other hand, appears in the optative of the verbs in *μ*, *εἴην*, *τιθείην* compare *φιλοίην*. The secondary form is *ν* for *μ* in the ending of the imperfect, without tach-vowel in *ἴστην*, with tach-vowel affixed to the stem in *ἔφερον*. The *ν* for *μ* is dropped and a tach-vowel is found in the first aorist in *α*, as *ἔδειξα* = *ἐδειкса(μ)*.

In Latin the *m* of the original *mi* is kept in *sum* = *esum-esm*, *esmi* = *εἰμί*, in *inquam*, in the imperfect in *bam* (see below), *eram*, in the conjunctive-optative *veham*, *sim* = *siem*, *esiem*, compare *εἴην* = *ἐσjήν*; elsewhere the termination is *o*: *fero* = *ferom*. Derived verbs with stem-ending *a*, *ama*, *voca*, contract this *a* with the *o* of the termination; *voco* = *vocao*, *vocajo*, as *τιμῶ* from *τιμαω*, *τιμαjω*.

In the 2nd person singular the pronominal stem is *tva*; with expulsion of *v*, *ta* as in the Latin imperative in *to*; *θι* aspirated in *κλῦθι* imperative, *θα* in *οἶσθα* = *φοιδτα* with dissimilation and aspiration of the *τ* under the influence of the spirant *σ*; *ῆσθα* with radical *σ*; through assibilation we get from this, *σιwa*, *σιwi*, *σι*, *s*.

In Greek we find the primary form $\sigma\iota$ in $\epsilon\sigma\sigma\acute{\iota}$ Ionic = original form *assi*, from which comes the Homeric $\epsilon\acute{\iota}\varsigma$, the personal ending being entirely lost in the Attic form $\epsilon\acute{\iota}$, *thou art*, and = *thou wilt go*. $\phi\acute{\epsilon}\rho\epsilon\iota\varsigma$, $\phi\acute{\epsilon}\rho\eta\varsigma$ from $\phi\epsilon\rho\epsilon\sigma\iota$, $\phi\epsilon\rho\eta\sigma\iota$, with transposed or epenthetic ι . Moreover we find the termination $\sigma\theta\alpha$ in the Homeric conjunctive in $\epsilon\theta\acute{\epsilon}\lambda\eta\sigma\theta\alpha$, in the Epic and Æolic indicative $\tau\acute{\iota}\theta\eta\sigma\theta\alpha$, $\phi\acute{\eta}\theta\sigma\theta\alpha$, $\delta\acute{\iota}\delta\omega\iota\sigma\theta\alpha$, $\epsilon\chi\epsilon\iota\sigma\theta\alpha$, in the optative $\beta\acute{\alpha}\lambda\omega\iota\sigma\theta\alpha$, in the imperfect $\eta\theta\sigma\theta\alpha$, $\epsilon\phi\eta\sigma\theta\alpha$, $\eta\delta\eta\sigma\theta\alpha$ Attic—compare Latin perfect 2nd singular and plural *sti*, *stis*, and 1st plural *μεσθα* for *μεθα*, where $\sigma\theta$ represents the simple aspirate. The secondary form is ς as in $\epsilon\phi\epsilon\rho\epsilon\varsigma$, $\phi\acute{\epsilon}\rho\omega\iota\varsigma$, as also in $\iota\sigma\tau\eta\varsigma$, $\tau\acute{\iota}\theta\eta\varsigma$, $\delta\acute{\iota}\delta\omega\varsigma$. Perfect $\lambda\acute{\epsilon}\lambda\omega\iota\pi\alpha\varsigma$. In Latin *legis* = *legesi*, the optative *sis* = *sies*; *es*, *thou art* = *ess*, *essi*, *assi*; $\bar{e}\varsigma$, *thou eatest* = *eds*, root *ed*; *vis* = *ves*, *vels*, compare the conjunction *vel*, originally an imperative. The 2nd singular perfect is *sti*, compare above, $\sigma\theta\alpha$.

Imperative $\theta\iota$: $\acute{\iota}\theta\iota$, $\acute{\iota}\sigma\theta\iota$ = $\epsilon\sigma\theta\iota$, $\acute{\iota}\sigma\theta\iota$ = $\epsilon\iota\delta\theta\iota$, dissimilation from the root $\epsilon\iota\delta$, $\gamma\acute{\omega}\theta\iota$, $\delta\rho\nu\theta\iota$, $\acute{\iota}\lambda\theta\iota$, $\acute{\alpha}\nu\omega\chi\theta\iota$, $\sigma\tau\acute{\eta}\theta\iota$, $\epsilon\sigma\tau\alpha\theta\iota$ by the side of $\theta\acute{\epsilon}\varsigma$, $\delta\acute{o}\varsigma$, for $\theta\epsilon\tau\iota$, $\delta\omicron\theta\iota$, ι being rejected and ς instead of θ at the end of a word; $\tau\acute{\iota}\theta\epsilon\iota$, $\delta\acute{\iota}\delta\omicron\nu$, $\acute{\iota}\sigma\tau\eta$ instead of $\acute{\iota}\sigma\tau\alpha\theta\iota$ after the analogy of the so-called contracted verbs, Homeric $\delta\acute{\iota}\delta\omega\theta\iota$. $\theta\iota$ disappears in verbs which have a tach-vowel: $\lambda\acute{\epsilon}\gamma\epsilon$, $\tau\acute{\iota}\mu\alpha$ = $\tau\iota\mu\alpha\acute{\jmath}\epsilon$, compare *lege*, *ama*. The bare stem appears in the Latin imperatives *dic*, *duc*, *fac*, *fer*, compare the conjunction *vel*, originally an imperative. The emphasised form in Latin in *to*, *esto*, *memento*, is an imperative perfect from *tod* = *tat* reduplicated. The 3rd person pronominal stem is used for the 2nd and 3rd persons.

The demonstrative pronoun of the 3rd person singular is *ta*—compare τό, τοί, Sec. 38, 3, and in Latin *tum, tam, talis, tantus*—is weakened into *ti* and mostly softened to *si*. The original form *asti, he is, dadāti, he gives*, becomes ἐστί, δίδωσι. *τι* is retained in ἐστί compare πίστις, and in the Doric δίδωτι, τίθητι, ἴσατι; *σι* is found in φησί, τίθησι, εἴσι, ζεύγνυσι, and in the Homeric conjunctive ἄγῃσι, εἵπησι, ἐθέλῃσι, δῶσι, δώῃσι, with transposed or epenthetic *ι* in the preceding syllable (and hence the *ι* subscript is to be retained). The indicative of verbs in *ω* is as ἔχεισι. Forms in *ησι* as ἔχῃσι are doubtful. The termination is dropped in φέροι from φερεῖτι, φερετι, φερεσι with ellipsis of the *σ* between vowels (?), and in the perfect γέγονε. In the secondary forms of the historic tenses and optative *τ* must be dropped according to the law of final sounds: ἔβη, ἐδίδω, ἔφερε, ἦε, φέροι, εἴη. Imperative *τω* from *τωτ*, ἰστάτω, perfect ἐστάτω, τιθέτω, compare the Latin—*to*. In Latin the *t* of the secondary personal ending is retained, as *est, legit = leget(i), amat, erat, pepigit*, compare πέπηγε. And though in Latin the *t* of the 2nd person is softened to the spirant *s*, the *t* of the 3rd person has kept its sound as a dental tenuis.

The original 1st person plural was *masi = matva, matvi*, see above, whence *mas, ma*, original form *asmasi, we (I + thou) are*. From the Doric *μες* in εὐρομες, we find *μεν* in Ionic and even in Æolic, with the spirant dropped, originally *ma*. A nasal sound was afterwards introduced to strengthen the ending: ἐσμέν, ἴμεν = *imasi, imatva; φέρομεν*, with a bare and therefore short tach-vowel. Latin *legimus* from *legumus*, compare *sumus = esumus, so volumus, quaesumus*.

The 2nd person plural was *tuasi, tasi*, see above, original form *astasi, you are*. In Greek a bare *τε* remains, as in *ἔστέ, ἴτε* dropping entirely the sound of the 2nd person pronominal stem, which is weakened first to *σι*, then to *ς*, and finally altogether abandoned. The Latin *tis* shows a trace of the 2nd person pronominal stem, *legitis* = *legetes*, *λέγετε(ς)*. The imperative shortens into *te, legite* = *legete*, emphatic—*tote*. *ἄνωχθε*, by the side of *ἀνώγετε, ἐγγήγορθε*. The dual originally = 2nd person plural *τον* from *tasi*, as the 1st person plural *μεν* from *masi*.

The 3rd person plural was *anti, nti*, see above. In Greek the primary form is *αντι, ντι*, original form *asanti, they are*, thence *ἄσσι* Ionic instead of *ἔσαντι*, Doric *ἐντι*, and finally *εἰσί* = *ἔσ-ντι*, *ἴασι* from *ἱαντι*, *φᾶσί* from the Doric *φαντί*, *ν* being dropped and *a* lengthened, Attic *διδάσσι, τιθέασι, δεικνύασι* = *τιθεαντι, διδοαντι, ἰστᾶσι* = *ἰστααντι*; the Homeric *τιθείσι, ἰείσι, διδοῦσι, ῥηγνῦσι*, are from the Doric *τίθεντι, δίδοντι*; *φέρουσι* is from the Doric *φέροντι*, compare *γερονσία* from *γεροντια*. The Latin *sunt* = *esonti, ferunt* = *feronti, tremunt* archaic *tremonti*. The secondary form is *ant, nt, τ* being dropped in the Greek termination, *ἦσαν* = *ἦσαντ, ἔφερον*, the optative *εἶεν* = *ἔσ'εντ, φέροιεν*. In Latin *t* is retained as *erant*; the termination *σαν* in *ἔφασαν, ἔδοσαν*, etc., equals *ἔσαν*, shortened, and without the augment; so *ἰσταίησαν*, connected with *ἰσταίεν*, is a form composed with *σαν* = *asant*; *εἴησαν*, by the side of *εἶεν*, is a compound of the root *as*, *ἐς* with itself; *ἴσασι* = *ἴδ-σαντι*, so *εἴξασι* = *εἰκσαντι*; with the primary form in *σαντι, asanti* compare *dederunt* from *dedisonti*. Imperative *οντων* with the addition of *ν*, compare *legunto*; *τωσαν*

is a late form from *τω* of the singular and *σαν* shortened from *asant*.

The primary form of the 3rd person dual is *τον*, the secondary form in the historic tenses is *την* : *ἦστον*, *ἦστην*, compare *ἦστε* with the *σ* of the root retained, connected with *ἦτον*, *ἦτην*, compare *ἦτε*.

LIII. GREEK MIDDLE-PASSIVE.

The personal endings of the middle voice are lengthened active forms which have a reflexive force. Original forms *mai*, *sai*, *tai*, from *mami*, *tvatvi*, *tati* = *I myself*, or *to myself*, *thou thyself*, or *to thyself*, *he himself*—the constructive combination of two personal pronouns acting as subject and object, which is either nearer or more remote, in distinction from the copulative combination, *I and thou*, *thou and thou*, in the plural active.

The primary form of the 1st person singular is *μαι* from *mami*; the secondary *μην* from *mam*; *τίθεμαι*, *φέρομαι*, *φέρωμαι*; *ἐφερόμην*, *φεροίμην*, *ἐτιθέμην*.

The primary original form of the 2nd person singular is *σαι* from the original *tvatvi*, *svasvi*, *svai*; the secondary is *σο* with the 2nd pronoun entirely lost.

α. Forms with the sibilant retained in conjugations in *μι* and in the perfect; *τίθεσαι*, *ἵστασαι*; *δύνασαι*, *ὄνοσαι* Homeric; imperfect *ἐτίθεσο*, *ἵστασο*; imperative *τίθεσο* etc., *ἐπίστασο*.

β. Forms where *σ* is dropped without contraction of the vowels: *λιλαίειαι*, *δίξηαι* Od. XI. 100, *ὄρηαι* XIV. 343; secondary: *ἐμάρναο*, *ὠδύσαιο* Od. I. 62; imperative *μάρναο*,

παρίσταο; aorist ἔθεο, θέο, θεῶ from the Homeric θέσο; on ὄρσο, δέξο, vide Sec. 63, 3.

γ. Forms without σ with contraction of the vowels in the 'tach-vowel' conjugation: φέρη, Attic φέρει from φερεσαι, Epic φέρει; the secondary form ἐφέρον from ἐφερεσο, Attic imperfect of the μι conjugation ἐδύνω, ἡπίστω, Homeric ἐκρέμω; imperative ἐπίστω; aorist ἔθου, ἔδου Attic; imperfect φέρον, aorist θοῦ, δοῦ from θεσο, δοσο.

The primary form of the 3rd person singular is ται from *tati*, secondary το from *tat*, imperative σθω from ττω, by doubling the τω of the active; the σ is due to dissimilation and the aspirate θ to the influence of the breathing, φάσθω.

The 1st person plural is μεθα, μεσθα, from *madhai* = *matvai*, *matasi* = *I thou thyself*. The 2nd person plural σθε from *stvai* contains the pronoun of the 2nd person in three forms = *thou thou thee*. The 3rd person plural, *antai*, *ntai*, from *antati* = *he he him*, with ν dropped becomes *atai*. In Epic and Ionic *αται*, *ατο*, α is an original element of the personal ending; *κέαται*, *κέατο*, *βεβλήαται*, *ἔαται*, old Attic only after a consonant *ἐφθάραται*; elsewhere primary *νται*, secondary *ντο*.

LIV. LATIN MIDDLE-PASSIVE

In the place of the lost primitive middle-forms come new formations and periphrases, compare Sec. 50.

α. New formations—by adding to the verbal stem with a tach-vowel the accusative of the reflexive pronoun *se* (*sua*), here joined to the 1st and 2nd persons as well as

to the 3rd, reduced to *s, r*. 1st person singular *legor* from *lego-se*. 2nd person singular *legeris* from *leges-i-s(e)*, *legere* = *leges-se*. 3rd person singular *legitur* from *legeti-s(e)*. 1st person plural *legimur* = *legimus-se*. 3rd person plural *leguntur* = *legunt-(u)-se*. Imperative *amare* = *ama-se*, *legere* = *lege-se*.

β. Periphrases—in the 2nd person plural by the participial middle-stem in *mino* in the plural, *estis* being omitted, as *amamini*, *legimini*. This participial form takes also inorganic characteristics of mood and tense in *legamini* = *legimini sitis*, *legemini* = *legimini eritis*.

2. MODAL ELEMENTS.

LV. GREEK CONJUNCTIVE AND OPTATIVE.

The subjunctive mood in Greek is formed by the simple insertion of the modal suffix, or by intensifying the vowel which comes between the verbal stem and the personal ending.

In Latin the subjunctive is generally formed by compounding the verbal stem with a suitable conjunctive form of the auxiliary, Sec. 67. The mood of objective reality, *i.e.*, the indicative, is characterised by the lack of a special modal element, and by the immediate junction of the verbal stem to the personal ending.

The conjunctive is the mood of fact, conceived as happening or likely to happen, indicated in the present as a continuous, in the aorist as a momentary action. The original suffix was *a*, or in combination with the

tach-vowel $\bar{a}$. So the radical form, *asāmi*, *I may be*, from indicative *asmi*, *asāsi* from *assi*, etc. In Greek the primary personal terminations are ω or η for $\bar{a}$. The conjunctive also of the primary verbs in μ —without a tach-vowel in the indicative—is formed after the analogy of the verbs in ω with a lengthened tach-vowel, which is amalgamated with the final vowel of the root. $\bar{\omega}$, Ionic $\xi\omega$ from $\epsilon\sigma\omega = asāmi$, $\eta\varsigma$, Ionic $\xi\eta\varsigma$ from $\epsilon\sigma\eta\sigma\iota = asāsi$, η , Ionic $\xi\eta$, $\xi\eta\sigma\iota$, $\eta\sigma\iota = asāti$. 3rd person plural $\bar{\omega}\sigma\iota$, Ionic $\xi\omega\sigma\iota$, Doric $\xi\omega\sigma\iota$ from $\epsilon\sigma\omega\sigma\iota = asānti$. $\phi\bar{\omega} = \phi\alpha\omega$, $\phi\eta\varsigma = \phi\alpha\eta\varsigma$ (with η instead of $\bar{a}$), $i\bar{\omega} = i\epsilon\omega$, $\tau\iota\theta\bar{\omega} = \tau\iota\theta-\epsilon-\omega$, $i\sigma\tau\bar{\omega} = i\sigma\tau\alpha\omega$; so the aorist $\theta\bar{\omega}$, Epic $\theta\acute{\epsilon}\omega$, $\theta\acute{\epsilon}\acute{\iota}\omega$; $\delta\bar{\omega}$, $\delta\acute{\omega}\omega$, $\delta\bar{\omega}\mu\alpha\iota = \delta\omega\mu\alpha\iota$. The Homeric dialect still exhibits isolated remains of formations with short vowels of the conjunctive of primary verbs, which in the indicative were destitute of a tach-vowel. $\iota\omicron\mu\epsilon\nu$ Homeric conjunctive passes into $\acute{\iota}\mu\epsilon\nu$, later $\acute{\iota}\omega\mu\epsilon\nu$, after the analogy of the forms with the tach-vowel. In the O-conjugation the 1st person singular conjunctive does not differ from the indicative, $\phi\acute{\epsilon}\rho\omega$ from *bharāmi*. 2nd person singular $\phi\acute{\epsilon}\rho\eta\varsigma$ from $\phi\acute{\epsilon}\rho\eta\sigma\iota$, 3rd person singular $\phi\acute{\epsilon}\rho\eta = \phi\epsilon\rho\eta\tau\iota$, 1st person plural $\phi\acute{\epsilon}\rho\omega\mu\epsilon\nu$ from *bharāmasi*, 3rd person plural $\phi\acute{\epsilon}\rho\omega\sigma\iota$, Doric $\phi\acute{\epsilon}\rho\omega\sigma\iota = bharānti$.

The optative is the mood of wish and of mere conception of fact, a verbal stem strengthened by the verbal suffix *ja*, *to go*, serving as an auxiliary verb with the idea of effort—compare the verbal periphrases *venum ire*, *amatum iri*. Original form *as-ja-m*; in the Greek the modal suffix is η ι , ϵ . Secondary personal ending $\acute{\epsilon}\eta\nu = \acute{\epsilon}\sigma\acute{\jmath}\eta\mu$, $\acute{\epsilon}\eta\varsigma = \sigma\acute{\jmath}\eta\varsigma$, $\acute{\epsilon}\eta = \acute{\epsilon}\sigma\acute{\jmath}\eta\tau$ (by the side of $\acute{\epsilon}\omicron\iota\varsigma$, $\acute{\epsilon}\omicron\iota$ Ionic and Epic),

after the analogy of the conjugation with tach-vowel, see below, *εἴημεν*, *εἴμεν* = *ἐσζήμες*, *εἴεν* = *ἐσζέντ*; so *ἰείην*, *τιθείην*, *ἰσταίην*, *διδοίην* from present stem *ιε*, *τιθε*, *ἰστα*, *διδο*; 3rd person plural *ησαν*, as *εἴησαν*, etc., vide Sec. 52; the simple aorist is like the present, *δοίην* root *δο*, *θείην* root *θε*, *σταίην* root *στα*. Optative of the so-called contracted verbs *τιμῶην* from *τιμαο-ιη-ν*, connected with *τιμῶμι* = *τιμαο-ι-μι* as in the O-conjugation; lastly, the conjugation with the tach-vowel has for modal element only *ι*, which is contracted with the tach-vowel into the diphthong *οι*. 1st singular primary personal endings, Sec. 52: *φέροιμι* with older form *φέρουν*, otherwise secondary endings; middle *φεροίμην*. *ιοίην*, optative of *εἶμι*, unites the tach-vowel *α* and the suffix *ιη*, besides *ἰείη* II. XIX. 209 (*ἰείη?*), *ἴοι* as in the O-conjugation. The strong aorist of the O-conj. ends like the present, *λίποιμι*, *λάβοιμι* for *λαβουν*. The compound aorist retains *α*, *λύσαιμι*, *λυσαίμην*; the passive follows the conjugation in *μι* which has no tach-vowel, *λυθείην* = *λυθε-ιη-ν*, *φανείην* from *φανε-ιη-ν*.

LVI. LATIN CONJUNCTIVE-OPTATIVE.

1. The Latin conjunctive, as the only subjective mood, is fused with the optative, since the distinction of meaning between the various forms of the conjunctive and optative in Greek, became obliterated in Latin. The forms of the conjunctive and optative thus mixed with one another are also applied to the expression of the future.

2 The forms of the Latin conjunctive mood in *a* correspond with the Greek conjunctive in ω , η . With the original conjunctive suffix *a* are made the conjunctive forms of the 3rd, 2nd, and 4th conjugations. 1st singular *legam*, differs from the indicative *lego*; so also the archaic forms *fuam*, *creduam*, *perduam*; *doceam*, *audiam*; *legāmus* = $\lambda\acute{\epsilon}\gamma\omega\mu\epsilon\varsigma$, *legātis* = $\lambda\acute{\epsilon}\gamma\eta\tau\epsilon$.

3. Remains of the optative forms in Latin. The mood forms with $\bar{i}$, $\bar{e}$, from the original modal suffix *ja*, *ia*, by contraction *ie*, $\bar{i}$, $\bar{e}$, are optative in form and in origin.

Forms in $\bar{i}$: *sim* = *siem*, *esim*, $\epsilon\sigma\jmath\eta\mu$, $\epsilon\bar{\imath}\eta\nu$; so *sīs*, *sit*, the $\bar{i}$ was afterwards shortened, *sīmus*, *sītis*, *sint* from *siēs* = $\epsilon\bar{\imath}\eta\varsigma$, *siēmus* = $\epsilon\bar{\imath}\eta\mu\epsilon\nu$, *sient* = $\epsilon\bar{\imath}\epsilon\nu$ from $\epsilon\sigma\jmath\epsilon\nu\tau$. So *velim*, *edim* = *ediem*, besides *edam*, *duim* = $\delta\acute{o}\eta\nu$ by variation of the root *da* to *du* = $\delta\acute{o}$, besides *duam*, compare the archaic forms *perduim*, *creduim*, along with the conjunctive forms *perduam*, *creduam*; *dederim* = *dedi-siem*, with a strange shortening in the plural *dederīmus*; *faxim* = *facsisim*, Sec. 69, 2.

Forms in $\bar{e}$: the so-called future of the stem-verbs or the so-called 3rd conjugation was in the 1st singular in the older language *dicem*, *legem* (*e* from *ai* = the Greek $\alpha\iota$, $\omicron$ tach-vowel, ι modal element); this $\bar{e}$ was retained by the later language in the other persons *dices*, *dicemus* etc., which are to be considered as pure optative forms. The so-called conjunctive present of derived verbs in $\acute{o}$ = *ao*, *ajo*, of the 1st conjugation, *amem* from *ama-i-m*, compare $\tau\iota\mu\acute{\omega}\eta\nu$ = $\tau\iota\mu\omega\text{-}\jmath\eta\text{-}\nu$, is an original optative form.

4. Where both forms in $\bar{a}$ and in $\bar{e}$ are found, as in *legamus*, *legemus*, *audiamus*, only the conjunctive form in a has the signification of the subjective mood, the optative form in e retaining the signification of the future, that is for the 3rd and 4th conjugations. The optative 1st singular form *legem*, *audiem* was however displaced by the conjunctive form *legam*, *audiam*, which was then changed into the expression of the future. The 1st person singular conjunctive present, and the 1st person singular indicative future in conjugations 3 and 4 have consequently one and the same form which is used for the double purpose of denoting a wish and expressing futurity.

3. TENSE-STEMS.

LVII. IDEA AND CLASSES OF TENSE.

1. The tense-stem of a verb is that which remains of a given verbal form after taking away the personal terminations and the characteristic of the mood. It coincides with the root present forms in the case of root-verbs which contain the simple root without any sort of amplification or any intensification of vowels to express the present, e.g., *ἵμεν*, *φαμέν*, *λέγομεν*; and also in the unaugmented forms of the strong aorist, *λάβω*, *λάβοιμι*, *λίπε*. In the one case the form is marked as a present by the absence of the usual elements for the formation of other tense-stems; in the other case as an aorist by the want of the amplification of the present of the given verb

which belongs to the tense-stem (λείπω, λαμβάνω). In all other cases the tense-stem is distinguished from the root and consists of the root, plus reduplication, vowel-intensification, and additions to the termination.

2. A tense-stem can therefore be formed (α) from a simple — amplified or non-amplified — root, uncompounded with any other secondary verbal root, that is to say, without auxiliary. The simple tense-stems are the *Perfect* formed by reduplication of the root; the *Simple or Strong Aorist*, bearing usually the stamp of the simple root in contradistinction to the various amplifications expressive of the present, and characterised by a demonstrative adverb referring to past time, that is, the augment in the indicative, as well as by secondary personal terminations belonging to the tense. The *Present* is characterised by various extensions of the root, at the beginning, at the ending, and in the middle, as well as by primary personal endings. The *Imperfect* is derived from the present by means of the augment and secondary personal endings. The above are the Indo-Germanic and also the Greek simple tense-stems.

(β) By compounding the verbal root with the root *as*, *es*, *to be*, which serves as an auxiliary verb; the *Compound tenses* include the *Compound or Weak Aorist*, *Future*, and *Pluperfect*, to which also belong certain forms of the perfect resulting from other combinations, as well as of the aorist passive.

3. Greek, however, in the first-named tense-stems, the

perfect, aorist, present, and imperfect, has retained more simple forms than Latin, and has preserved a more primitive character in the formation of tenses. In Latin the present is the only tense which is formed simply throughout; in the perfect active it fluctuates between the two kinds of tense formation; it has lost the aorist with the exception of a few uncertain traces; its imperfect is a later formation by means of an auxiliary verb. On the Latin future, see Sec. 56, 3. 4, and under Compound Tense-Stems.

(1) SIMPLE TENSE-STEMS.

LVIII. THE GREEK SIMPLE PERFECT* AND PLUPERFECT.

1. The root is lengthened at the beginning of the word by means of reduplication. Reduplication was originally the doubling of the root or the compounding it with itself, with the view of intensifying and enhancing the verbal notion, and in its weaker form as the reduplication of the perfect, it is a sign to denote an action finished and completed at the present moment, while the augment denotes a momentary action in past time. The original form of the root is *da*, *sta*, thence *dada*, *stasta*.

The first root is shortened in the final sound, as in

* This is inserted here as the first tense-stem, because, with the omission of reduplication and vowel-intensification, it exhibits the pure verbal root, while the present stem in so many formations departs further from it, and the simple aorist betrays a secondary character in the augment and secondary personal endings.

ἀέλοιπα; in the commencing sound, as πέπληγα; the aspirate is dropped, as πέφηνα; the first sound of the reduplication is dropped, as ἔκτονα; instead of the root-vowel *ε* is the vowel of the reduplicated syllable. The so-called Attic reduplication in verbs which begin with *α*, *ε*, *ο* is partly the doubling of the whole root, as ὄδωδα, ὄπωπα, in simple root-verbs; and partly the doubling of the first part of the verbal stem, as ἀλήλιφα (ἀλιφ secondary root of ἀλείφω), εἰλήλουθα stem ἐλυθ, ἀγγήγερκα, ἀκήκοα, ἀρηρομένος II. XVIII. 548, ἐρηρέδαται XXIII. 284, compare ἀραίρηκα Ionic; further see the Grammars and Sec. 34, 9.

2. The root-vowel is lengthened sometimes in the first, sometimes in the second stage, Sec. 8: as λέληθα from the root λαθ; ἔαγα, Ionic ἔηγα = *Fe*φαγα, *Faγ*; ἔκτονα, κτεν; ἔοργα = *Fe*φοργα, *Feργ*; πέφευγα, φνγ; ἔρρωγα, *Fραγ*; οἶδα, *Fiδ*; the lengthened vowel is dropped in the plural, ἴδμεν, ἴσμεν; ἔοικα from εἰκ, *Fiκ*, dual ἔϊκτον: compare the pluperfect plural ἐπέπιθμεν from πέποιθα and the shortened plural forms of the perfect βέβᾶμεν, τέθνᾶμεν, τέτλᾶμεν, ἔστᾶμεν, δέδιμεν from the singulars τέτληκα, δέδοικα, etc., syncop. ἄνωγμεν.

3. Stem termination *α*: γέγονα(μι), οἶδα, Æolic φοῖδῃμι; shortened personal endings under the influence of the reduplication, as in the compound aorist; 3rd plural *ασι* = *anti*, primary ending; 3rd plural middle Epic and Ionic *αται* for the original *ανται*, Sec. 53, also in vowel root-endings. Consonant root-endings are in part aspirated, ἔρχαται (ἐῤρω), ἐτετάχατο.

4. A later peculiarity of the perfect stem, unknown as yet to Homer, is the aspiration of the final consonant of the root in one class of verbs; δέδῃχα from root δακ; εἵλοχα for λέλοχα from λεγ; πέπρᾱχα, transitive, and intransitive πέπρᾱγα; κέκοφα, by the side of an older Homeric κεκοπῶς from κοπ.

The simple Greek pluperfect which expresses the idea of completeness in past time is formed from the perfect stem with the augment and secondary personal endings. This formation is found in the active only in isolated instances, and is confined (α) partly to plural forms which themselves differ from those of the perfect in augment only, under the influence of which the lengthened vowel also disappears, as ἐπέπιθμεν from the perfect πέποιθα, ἐδείδιμεν, ἐδείδιε, with ending σαν in the 3rd person plural, as ἐτέθνασαν, without augment μέμασαν; (β) partly to forms from the 1st person singular with the secondary personal ending ον in analogy to the imperfect; as ἐμέμηκον from the perfect μέμηκα, from root μακ in μηκάομαι, ἤνωγον from ἄνωγα, which is not to be regarded as an imperfect from ἄνώγω a present formed from ἄνωγα; on ἠνώγεα, ἠνώγει, ἄνώγει, see Compound Pluperfect; compare this form of the pluperfect from the compound perfect ἐπέφυκον; dual forms εἵκτην, ἐκεγάτην. The middle always has, on the other hand, simple forms of the pluperfect in the 1st person singular μην from the perfect in μαι, with secondary personal endings and augment, as ἐλελύμην from λέλυμαι.

LIX. LATIN SIMPLE OR STRONG PERFECT.

In Greek only, where the aorist exists side by side with the perfect for the purpose of expressing momentary action in past time, the perfect serves exclusively to express completion in present time. In Latin, since there is no aorist, the perfect serves a double office, to indicate the completion of an act in present time—the perfect proper; and its momentary occurrence in past time—historic or aorist perfect. The chief method of formation is here also originally the reduplication of the root to express immediate action, which is then at once removed to the past. The reduplication is only partially adopted.

The stem-ending or tach-vowel is *i* (*ei*). 1st singular *i* (*ei*) for *eim*, as *fero* from *feromi*. 2nd singular and plural *sti*, *stis*; compare the combination *σθ* in the Greek personal endings *φῆσθα*, *τίθησθα*, 1st person plural middle *μεσθα*, infinitive *σθαί*. 3rd singular *it* from *eit* with original lengthening of the *i*, which is shortened in the 1st person plural *imus*; *i* is elided in syncopated forms as *dixti*, *scripsti* from *dicsi-sti*, *scripsi-sti*. The long *i* in the 3rd person singular is retained in *vixit*, *vendidit*, *dedit*, etc., in Old Latin, and in part by the later poets. 3rd plural *ērunt*, *ēre*, *dederunt* from *dedi-sont*, compounds with *esonti*, compare *ῖσασι*, Sec. 52,—where the *i* is transformed into *e* by the influence of the *r* which takes the place of *s* between two vowels.

1. Perfect forms in which the reduplication is retained. The root-vowel retained in the reduplication : *tutudi*, root *tud*, *pupugi*, *poposci*, *momordi*, *didici* from *disco* = *dic-sco*, compare *doceo*, root *dic*, as *dak* in *διδάσκω*,—and the archaic forms, *peposci*, *memordi*.

Reduplicated vowel *e*, especially when the root-vowel is *a* or a vowel derived from *a* through intensification or weakening : *dedi* from *da*, *cecini*, *pepigi*, *cecidi*, *fefelli*, *tetigi*, *peperi*, *peperci*, *tetini* archaic ; *cecidi* from *caedo* (*ae* = *ai*), *tetuli* archaic *tuli*, from root *tol* in *tollo* = *tal*, *τλα* in *τλῆναι* ; *pepuli* from *pello*, compare *πάλλω*. Where the root begins with *st*, *sp*, *sc*, the root-syllable loses the *s* and retains only the mute : *steti* root *sta* for *stesti* (dis-similation), so also *spopondi*, *scicidi* archaic form in connection with *scidi* ; compare the reduplicated present *sisto* = *ἵστημι*, *sistāmi*.

The reduplication is for the most part found only in simple verbs ; it is dropped in compound ones, as *expuli*, yet it is retained in verbs derived from *do*, *sto* : *abdidi*, *abstiti* ; syncope occurs after the prefix *re*, as *reppuli* = *repepuli*, *rettuli*, *rettudi*, *repperi*, where there is no assimilation arising from the original *red*.

The vowel of the root-syllable. The vowel of the present *a* becomes *e*, or *i*, before two consonants and before *r* : *fefelli*, *peperci*, *peperi*, *cecini*. The present-vowel *e* becomes *u* before *l* as *pepuli*, but compare *tetendi*. Roots ending in *a* lose the root-vowel in the root-syllable : *da* — *dedi*, *sta* — *steti*, after monosyllabic prefixes the vowel of the reduplication becomes *i* ; *abdidi*, *condidi*. Compare the change of the root-

vowel in the compound verbs, *caedo, occīdo, cecīdi*; *pango, impingo, pepigi*; *cado, incīdo, cecīdi*; *cano, occino, cecini*. The influence of the reduplication as well as of the prefixes weakens the vowel because the accent is thrown back.

The amplification of the present is dropped in the reduplicated perfect: *tutudi, pupugi*, present *pungo, pepigi* *pango, peperī* the *i* in *pario* being dropped, which belongs to the present stem only, Sec. 39, *momordi* by the side of the denominative present form *mordeo, pepuli*, in which the second *l*, which originated in *i, j*, is dropped.

2. Perfect forms in which the reduplication is dropped: *tuli, scīdi*, from *tetuli, scicidi*; *fidi* from *fid, findo*; in compounds as *comperi*, see above; as well as in those perfects whose stem coincides with the present, as *fui, plui, pandi, cudi* (*cūdo*), *verti, scandi, prehendi*, these probably arose from reduplicated forms such as *fufui, veverti*.

3. Perfect forms in which the vowel of the root-syllable is lengthened to compensate for the dropping of the reduplication; *ā* from *ǎ*: *lavi, cavi, favi, pavi*; *ē* instead of *ā* from *ǎ*: *feci = fefici, cepi, fregi, jeci, egi, pegi*; *ē* from *ě*: *veni, sedi* (from original stem-verbs, *veněre, seděre*, compare *sido*; *venio, sedeo* are presents with denominative stem forms, *legi, edi, emi*; *ī* from *ĩ*: *vidi* root *via* (*video* denominative), *vici, liqui*; *ū* from *ũ*: *fudi, fugi, iuvi, rupi*; *ō* from *ǫ*: *fodi, movi, vovi*. The length of the

vowel of the root-syllable is occasioned by the dropping of the first consonant : *jēci* = *jejici*, *ēgi* = *egigi*, *lēgi* = *leligi*.

All simple perfects therefore have originally sprung from reduplicated ones. The reduplication was either retained with a shortened root-vowel or dropped and the root-vowel lengthened instead.

LX. GREEK SIMPLE OR STRONG, SO-CALLED SECOND, AORIST.

The stem of the strong aorist is, with a few exceptions, the same as the simple verbal root. This in its unmodified state, as distinguished from the present stem, expresses momentary and transient action. Further formative materials are, for the indicative mood, the augment expressing past time inserted as a prefix before the root, and, through its influence, secondary personal terminations. An aorist form, like *ἔβην* root *βα*, coincides, as in *ἔφην*, with the imperfect of a verb, which in the present also shows only the bare root; but this is, like *βῶ*, *βαίνην*, etc., in distinction from *φῶ*, *φαίνην*, to be recognised as an aorist from the fact, that from the root *βα* no present form with naked root, such as *βημι*, is in use; *ἔβην* therefore, coexisting with the present *βαίνω*, is used as an aorist, while *ἔφην* with an original durative signification is used as an imperfect. The Homeric dialect frequently employs the reduplication in an intensive signification, with or without the augment, in order to form the strong aorist : *πέπιθον*, *ἔειπον* = *ἐφεφειπον*, *ἔπειφνον* with syncope of the

root-vowel, root $\phi\epsilon\nu$; $\epsilon\sigma\pi\acute{o}\mu\eta\nu = \sigma\epsilon\sigma\epsilon\pi.$, Epic and Attic $\epsilon\iota\pi\omicron\nu = \tau\epsilon\tau\epsilon\pi.$, $\eta\gamma\alpha\gamma\omicron\nu \acute{\alpha}\gamma\alpha\gamma\epsilon\acute{\iota}\nu$; $\eta\nu\acute{\iota}\pi\alpha\pi\omicron\nu$, $\eta\rho\acute{\upsilon}\kappa\alpha\kappa\omicron\nu$ reduplicated Epic aorist with repetition of the final consonant instead of the first root consonant.

1. Forms from the root-ending, without a tach-vowel, are almost entirely confined to roots with vowel-endings: $\epsilon\beta\eta\nu$, $\epsilon\phi\theta\eta\nu$, $\epsilon\sigma\beta\eta\nu$, $\epsilon\tau\lambda\eta\nu$, $\epsilon\gamma\omega\nu$, $\epsilon\acute{\alpha}\lambda\omega\nu$ stem $\acute{\alpha}\lambda\omega$, $\epsilon\beta\acute{\iota}\omega\nu$, $\epsilon\delta\upsilon\nu$, $\epsilon\phi\upsilon\nu$, 3rd person singular $\epsilon\kappa\tau\alpha$, $\omicron\upsilon\tau\alpha$, 1st person plural $\epsilon\theta\epsilon\mu\epsilon\nu$, $\epsilon\delta\omicron\mu\epsilon\nu$, 3rd person plural $\epsilon\beta\alpha\nu$; $\epsilon\theta\epsilon\sigma\alpha\nu$ in composition, Sec. 52. Conjunctive-optative, Sec. 55, $\theta\hat{\omega} = \theta\epsilon\omega(\mu\iota)$, $\theta\hat{\eta}\varsigma$, $\theta\epsilon\acute{\iota}\eta\varsigma = \theta\epsilon\eta\sigma\iota$, $\theta\epsilon\acute{\iota}\eta\nu$, etc. Imperative $\tau\lambda\hat{\eta}\theta\iota$, $\kappa\lambda\hat{\upsilon}\theta\iota$, $\pi\acute{\iota}\theta\iota$, reduplicated $\kappa\acute{\epsilon}\kappa\lambda\upsilon\theta\iota$, Sec. 52. Middle $\epsilon\theta\acute{\epsilon}\mu\eta\nu$, $\epsilon\phi\theta\acute{\iota}\mu\eta\nu$, optative $\phi\theta\acute{\iota}\mu\eta\nu$, 3rd singular $\pi\lambda\hat{\eta}\tau\omicron$, $\lambda\acute{\upsilon}\tau\omicron$, $\sigma\acute{\upsilon}\tau\omicron$, $\chi\acute{\upsilon}\tau\omicron$, $\acute{\alpha}\mu\pi\nu\tau\omicron$. Epic middle forms from verbs with consonantal root-endings without a tach-vowel: $\gamma\acute{\epsilon}\nu\tau\omicron$, $\delta\acute{\epsilon}\kappa\tau\omicron$, $\lambda\acute{\epsilon}\kappa\tau\omicron$, $\pi\acute{\alpha}\lambda\tau\omicron$, $\acute{\alpha}\lambda\sigma\omicron$ 2nd singular, $\acute{\alpha}\lambda\tau\omicron$ 3rd singular, $\omega\rho\tau\omicron$, $\mu\acute{\iota}\kappa\tau\omicron$, $\pi\hat{\eta}\kappa\tau\omicron$. Infinitive $\pi\acute{\epsilon}\rho\theta\alpha\iota = \pi\epsilon\rho\theta\text{-}\sigma\theta\alpha\iota$, $\lambda\acute{\epsilon}\chi\theta\alpha\iota$, $\omicron\rho\theta\alpha\iota$, $\delta\acute{\epsilon}\chi\theta\alpha\iota$. Participle $\acute{\alpha}\lambda\mu\epsilon\nu\omicron\varsigma$, $\acute{\alpha}\rho\mu\epsilon\nu\omicron\varsigma$, $\delta\acute{\epsilon}\gamma\mu\epsilon\nu\omicron\varsigma$, $\acute{\alpha}\sigma\mu\epsilon\nu\omicron\varsigma$, Sec. 21, used adjectivally with σ from δ . Imperative $\lambda\acute{\epsilon}\xi\omicron$, $\delta\acute{\epsilon}\xi\omicron$, $\omicron\rho\sigma\omicron$, Sec. 63, 3.

2. Forms with tach-vowel: $\epsilon\lambda\iota\pi\omicron\nu$, $\epsilon\phi\upsilon\gamma\omicron\nu$, $\epsilon\lambda\alpha\beta\omicron\nu$. Middle $\epsilon\lambda\iota\pi\acute{o}\mu\eta\nu$. The moods correspond to those of the present. For reduplicated forms, see above. To these forms with unaltered short root-vowel ($\lambda\iota\pi$, $\phi\upsilon\gamma$), the ear itself attaches the idea of momentary action, whereas the lengthened present-imperfect form by its sound and length expresses the idea of duration, compare $\epsilon\lambda\iota\pi\epsilon$, $\epsilon\lambda\epsilon\iota\pi\epsilon$.

3. Forms with change of vowel—with syncope of the radical vowel or metathesis, as in *ἔπραθον* from *πέρθω*, a special change of the root in the strong aorist—in order to distinguish the aorist from the imperfect: *ἔκτανον*, root *κτεν*, *ἔτραπον*, imperfect *ἔτρεπον*.

The aorist formation has been lost in Latin through the want both of the augment and of the distinction between primary and secondary personal endings. The following verbal forms are regarded as sporadic remnants of the simple aorist; *parentes*, *parents*, in meaning = *οἱ τεκόντες*, in contradistinction to the strengthened present form *parientes* = *οἱ τίκτοντες*; the archaic indicative *tago*, *tagit* with the present *tango*, compare the Homeric reduplicated aorist *τεταγών*; *pagunt* with the present *pango*, root *pag*, compare *πήγνυμι*, passive aorist *ἐπάγην*. An aorist form distinct from the present cannot exist in Latin except where the present stem is strengthened by *i*, *j*, or by the introduction of nasal sounds, the omission of which makes the recognition of the aorist possible.

LXI. GREEK AND LATIN PRESENT STEMS.

The present stem comprises a very numerous series of forms. These are caused by the addition of vowels and consonants to the root, by lengthening the root at the beginning, in the middle, and at the end, and they often differ very widely from the root. Each of these forms has its peculiar meaning, denoted by the suffix or the infix, which need not here be more fully specified—intensive,

durative, inchoative, iterative, desiderative, causative, intransitive, passive. The present is distinguished by the primary personal endings both from the imperfect, even where this latter has no augment, and from the strong aorist, and especially from the latter by its lengthened root.

1. Present stems identical with the simple root, to which is added the personal ending. (α) Forms without tach-vowel. Vowel-root ι, φα: plural ἴμεν, ἴτε, ἴασι = *imasi, itasi, ianti*; φαμέν, φατέ,—φᾶσί = φαντί Doric, with compensatory lengthening—φάθι. In the singular the root-vowel is lengthened, εἶμι, φημί, etc. There is a change of quantity between the singular and plural in such primitive forms; the stem is strengthened in the singular where the termination is lighter, but lightened in the plural, the terminations of which were originally heavier. Compare Perfect, Sec. 58, 2. Consonantal root ἐς, thence εἶμι = ἐσμι, Æolic ἔμμι, Sec. 52. Latin *sum*, etc., Sec. 52. From the root ι, *to go*, the supine *itum* shows the bare root; *ed, to eat*, for the 2nd singular, see Sec. 52, 3rd singular *est = edt*, dissim. = *edti*, so *volt, fert, dat, stat*; 1st plural *dāmus, dātis*; passive *dātur*; so *se* is joined immediately to the root in the infinitive in *esse, to be, esse, to eat = edse, ferre = ferse, velle* with progressive assimilation = *velse, volve*, Sec. 40. (β) Forms with a tach-vowel: τίω, τίομεν, compare ἴμεν, φέρω, λέγω. Latin root ι, *to go*, in 1st singular *eo = iō*, 3rd plural *eunt = iunt*, conjunctive *eam = iam*, participle *iens*, with inflexion of the tach-vowel (*i* is changed to *e*, except in *iens*,—but on the other

hand compare *euntis*,—before all endings beginning with a vowel); *veho*, *lego*.

2. The vowel of the simple root is strengthened (α) where there is immediate addition of the personal ending. Sporadic strengthening occurs in the indicative singular of primitive verbs: root *ι*, present stem *ει*, thence *εἶμι*, *εἶς*, *εἷ* = *εἶσι*, *εἶσθα*, 3rd singular *εἶσι*. Conjunctive and optative *ἴω*, *ἴοις*, are inflected with a tach-vowel; *ἴομεν*, *ἴοιην*, Sec. 55. Root *φα*, present stem *φη*, *φημί*, *φῆς*, *φησί*. Latin root *i*, strengthened to *ī* = *ei*: *īs*, *īt*, *īmus*, *ītis*, (compare on the other hand *ἴμεν*), passive *ītur*, imperative *ī*, *īte*, infinitive *īre*. Compare *dās*, *stāmus*, *stātis*, *stāre*; *fāmur*, *fāri*. Also in Greek, *η* remains in the plural of verbs in *ημι*, which are secondary forms of verbs in *εω*, as the Æolic *ὄρημι*, *φόρημι*, *αἵτημι*. (β) Where inflexion with the tach-vowel occurs the strengthening of the vowel is universal: *φεύγω*, *φυγ*; *λείπω*, *λιπ*; *λήθω*, *λαθ*; *τήκω*, *τακ*; *τεύχω*, *τυχ*; *τρώγω*, *τραγ*; *τίω*, also with *ῑ*, *τι*. Verbs in *εω*, as *ρέω*, *χέω*, *πλέω*, from a root in *υ*, *ρύω*, *χυ*, *πλυ*, had in the present an original vowel-strengthening from *υ* to *ευ*, but the *υ* changed into *φ* afterwards disappeared, compare *γλυκός*, genitive *γλυκέος* from *εφος*; further strengthening in *πλώω*, *ρώω*, *χώομαι*, besides the more frequent Epic *πλείω*, Latin *dūco* from *dūc* in *dux*, *dūcis*; *dīco* from *dīc* in *indicare*, *causidīcus*, *veridīcus*, *maledīcus*; *fīdo* from *fīd* in *fides*, *perfidus*; *nūbo* co-existing with *pronūba*.

3. Reduplication of the root with the vowel *ι* of the

present-tense reduplication, which has an intensive-durative signification, while the vowel of a root which ends in a vowel is lengthened in the singular: root *δο*, present stem *διδο*, singular *διδω*, *δίδωμι*; *στα*, *ίστα*, *ίστη*, *ἴστημι*; *θε*, *τιθε*, *τίθημι*; *έ*, *ιε* = *ιέ*, *ιη*, *ἴημι* = *jījāmi*. Compare *δίζημαι*, Sec. 32, with *ζ* = *δj*. Plural without lengthening, *δίδομεν*, *ἴσταμεν*, *τίθεμεν*, *ἴεμεν*. Root *δε*, *to bind*, *δίδη* imperfect II. XI. 105, *διδέντων* Od. XII. 54; root *βα*, *βιβάς*; root *χρα*, *κίχρημι*. Nasalised reduplication *πίμπλημι*, *πίμπρημι* from *πλα*, *πρα* in *πλήθω*, *πρήθω*.

Reduplicated present stems with a tach-vowel: *γίγνομαι* root *γεν* = *γιγεν.*, *πίπτω* = *πιπετω*, *μίνω* = *μιμνω*; *ἴζω* root *εδ*, *sed* = *ιεδjω*, compare *sīdo* = *sisedo*, see also (by reason of the suffix *ja*) see under 5 below; *λιλαίομαι*, *γινγνώσκω*, *διδράσκω*, *τιτύσκομαι*, *πιφαύσκω* with suffix *σκ*. The present reduplication may be retained in other tense-stems: *ιαύω* root *áf*, Sec. 31, *ιάπτω*, *ιάχω* = *fifaχ*, *ιάλλω*, *τιταίνω*, *διδάσκω*; compare future *διδώσω* Od. XIII. 358. Diphthongal reduplication in *δαιδάλλω*, *παιπάλλω*, *παιφάσσω*, *ποιπνύω*, *δείδω*, *δειδίσκομαι*; the simple root-vowel is repeated and nasalised in *παμφαίνω*. More uncertain and irregular reduplication in *παπταίνω* from root *πτα*, *πτακ* in *πτήσσω*, *ἀραρίσκω*, *μαρμαίρω*, *μερμηρίζω*, Sec. 27, *καχλάζω*, *παφλάζω* Il. XIII. 798, root *φλα*, Sec. 25, *πορφύρω* root *φυρ*, Sec. 37, *ὀπιτεύω* root *ὀπ*, Sec. 19, 2, *δενδίλλω* Il. IX. 180, *τηλεθάω* root *θαλ*, *ἀπαφίσκω* stem *ἀπαφ*, aorist *ἀπαφεῖν*, root *ἀφ*, *νηνέω* from *νέω* in *παρενήνεον* Od. I. 147.

Latin *gigno* = *gigeno*, as *γίγνομαι*, *sido*, *sisto*, compare the perfect reduplication *steti* Sec. 59, 1, *sero*, *I sovi*,

= *seso, siso*,—with *e* before *r* for *i* as *dederunt* = *dedisont*,—root *sa*, *sātum*, compound perfect *se-vi*. Verbs with original and stable reduplication, *coquo* Sec. 19, 2; *bibo* = *pīpo*, root *pi*, *πi* in *πiθi* compare *potus* Sec. 18; *vivo* Greek root *βi* Sec. 22; *dedo*, according to the analogy of the perfect reduplication.

4. Present stem with consonantal suffixes: *νu* with intensification of the root-vowel, *ζεύγνυμι*, *δείκνυμι*, *ρήγνυμι*, *πήγνυμι*; without intensification, *ὄρνυμι*, *ἔννυμι*, in which the first *ν* is assimilated from *σ*, *ὄλλνυμι* from *ὄλν*, with progressive assimilation; *στορέννυμι* = *στορεσν*. stem *στορεσ*, etc. These are all denominative. Suffix *να*: *δάμνημι*, *κίρνημι* (*κεράννυμι*), *σκίδνημι* by the side of *σκεδάννυμι*, *πίλναμαι*; also with the suffix *ja*: *ικνέομαι*, *κυνέω* (*ἔκυσα*), *δαμνάω* (*ἐδάμην*). Suffix *ν*: *πίνω* (*πιεῖν*, *πῖθι*), *τίνω*, *κάμνω*, *δάκνω*, *τέμνω*, *φθάνω*, *φθίνω*. Suffix *αν*: *ικᾶ'νω* compare *ικᾶνός*, *κιχάνω*, *αὔξάνω*, *ἁμαρτάνω*; with nasal infix *λαγχάνω*, *λανθάνω*, *λαμβάνω*, *θιγγάνω*, *μανθάνω*, *χανδάνω*, compare *θάμβος*, *θαμβέω*, *τάφος*, *ἔταφον*, root *ταφ*, nasalised *θαμβ*.

Latin *lino*, *le-vi*, *sino*, *sī-vi*, *sītum*, *cerno*, *cre-vi*, *sterno*, *stra-vi*, *sperno*, *spre-vi*, *pōno*, from *posno*, *posino*, *po-sī-tus*. Present stem with nasal strengthening without suffix: *tango* (*tag*), *findo*, *fundo*, *rumpo*, *scindo*, *tundo*. The nasal consonant grows into the root and becomes fixed in *finco*, *finxi*, *pingo*, *jungo*, by the side of *figulus*, *pictum*, *jugum*.

5. Suffix *ja*, *j*, *i*, according to the different changes determined by the laws of sound. *J* vocalised *δαίωμα* root *δα*, *ἐδασάμην*; *ἰδῶ* with fixed *ι* Sec. 39, 3 *i* thrown

back as *i*, βαίνω = βανῶ root βα, suffixes ν and *j*, φαίνω, τείνω, πείρω (περ, ἔπαρον, πέπαρμαι), εἶλω = ἐλῶ (ἀλῆναι), κρῖνω = κρινῶ future κρινέω, aorist participle κριθείς, πλῦνω πλύνῶ, κλῖνω κλινῶ, ἐκλῖθην; *j* as a mixed sound according to Sec. 34, 3: ὄζω — ὄδ*j*., ἔζομαι — ἐδ*j*., φράζω aorist πέφραδον, κράζω root κραγ; τάσσω root ταγ, τακ, πτήσσω root πτακ, πτύσσω root πτυχ, φρίσσω root φρικ, λίσσομαι root λιτ; *j* assimilated in ἄλλομαι compare *salio*, βάλλω, θάλλω (τεθελώς, θάλος), πάλλω, σφάλλω, ἀγγέλλω, στέλλω, ὀφέλλω Homeric, connected with ὀφείλω, as εἶλω with ἱλλω; *j* is dropped between the vowels in ὀπύω, by the side of ὀπνίω, also φύω, Æolic φυίω, θύω. Compare Latin verbs in *io* of the 3rd conjugation with *i* syncopated as *cupio cupimus*, *capio*, *fugio*, *fodio*, *morior*, *patior*, *gradior*, as opposed to the fixed *j* contracted to *i* in the 4th conjugation; *ero* = *esjo*, *erunt* = *esjunt*, as ἔσσομαι = ἐσ*j*., which is a present with future signification. *J* is dropped in derived verbs in *uo*, as *statuo*, *tribuo*, in verbs in *eo* as *moneo*, in *ao*, or *o*, as *amo* for *amajo*, *amas* = *amais*. *J* is assimilated in *pello* compare πάλλω, *percello*, *fallo* compare σφάλλω, *vello*, *curro*.

6. The suffix σκ has generally an inchoative signification which may easily be recognised,—compare the diminutive suffix ισκο in νεανίσκος and *adolescens*; βάσσω, φάσσω, θνήσσω, reduplicated γιγνώσσω, διδράσσω, πιφαύσσω, μιμνήσσω; it is found with a subsidiary vowel ἀρέσσω, ἀλίσκομαι, ἀραρίσσω, εὐρίσσω, ἐπαυρίσσω; in denominatives γηράσσω. One of the root consonants is sometimes dropped before σκ, as διδάσσω from stem διδαχ.

root $\delta\alpha\chi$, $\delta\alpha\kappa$, see $\delta\alpha$ Sec. 21, $\delta\epsilon\iota\delta\iota\sigma\kappa\omicron\mu\alpha\iota$ root $\delta\iota\kappa$, $\epsilon\iota\sigma\kappa\omega$ root $\iota\kappa$, $\tau\iota\tau\acute{\upsilon}\sigma\kappa\omicron\mu\alpha\iota$ root $\tau\upsilon\kappa$, $\tau\upsilon\chi$ Sec. 17, $\lambda\acute{\alpha}\sigma\kappa\omega$ root $\lambda\alpha\kappa$; $\sigma\kappa$ is aspirated in $\pi\acute{\alpha}\sigma\chi\omega$ root $\pi\alpha\theta$ or $\pi\alpha$; instead of $\sigma\kappa$ we find χ in $\epsilon\rho\chi\omicron\mu\alpha\iota$ from $\epsilon\rho\sigma\kappa$ root $\epsilon\rho = \omicron\rho$ in $\omicron\rho\nu\nu\mu\iota$, connected with $\epsilon\lambda$ in $\epsilon\lambda\theta\epsilon\iota\nu$; κ is weakened to γ in $\mu\acute{\iota}\sigma\gamma\omega$, compare *misceo* root $\mu\iota\gamma$, *mic*, Sec. 27. An iterative signification of this suffix appears in the Epic and Ionic iterative forms of the imperfect and aorist to denote that a continuous action is repeated or that an action is begun in time past; $\epsilon\chi\epsilon\sigma\kappa\omicron\nu$, $\delta\acute{o}\sigma\kappa\omicron\nu$. Compare Latin *nascor*, *pasco*, *nosco*, *cresco*, *disco* = *dicisco*, *posco* = *porcisco* root *porc*, *proc*, *prec* in *precor*, *proculus*, Sec. 18; *apiscor*, *adipiscor*, *paciscor*, *proficiscor*, *revivisco*, nasalised *nanciscor*; of denominatives *obdormisco*, *concupisco*, *obliviscor*, *inveterasco*, *aresco*, *mauresco*, *delitesco*.

7. The dental suffix *ta* or further formation of the root by means of the determinative *t*—compare *t* in passive participles and verbal adjectives—is mainly found after labials; $\tau\acute{\upsilon}\pi\tau\omega$ root $\tau\upsilon\pi$, $\kappa\rho\acute{\upsilon}\pi\tau\omega$ compare $\kappa\rho\acute{\upsilon}\phi\alpha$, $\rho\acute{\alpha}\pi\tau\omega$ compare $\rho\acute{\alpha}\phi\acute{\eta}$, $\theta\acute{\alpha}\pi\tau\omega$ $\epsilon\tau\acute{\alpha}\phi\eta\nu$, $\beta\acute{\alpha}\pi\tau\omega$ $\beta\alpha\phi\acute{\eta}$, $\alpha\pi\tau\omega$ $\alpha\phi\acute{\eta}$, $\beta\lambda\acute{\alpha}\pi\tau\omega$ $\epsilon\beta\lambda\acute{\alpha}\beta\eta\nu$ $\beta\lambda\acute{\alpha}\beta\eta$, $\iota\acute{\alpha}\pi\tau\omega$, Sec. 32, 4, $\epsilon\gamma\chi\rho\acute{\iota}\mu\pi\tau\omega$ nasalised; after gutturals, $\tau\acute{\iota}\kappa\tau\omega$ $\tau\epsilon\kappa$, $\pi\acute{\epsilon}\kappa\tau\omega$ $\pi\epsilon\kappa$; after a vowel $\acute{\alpha}\nu\tau\omega$ connected with $\acute{\alpha}\nu\omega$. Compare *pecto*, *necto*, *flecto*; *t* is weakened to *d* in *tendo*, *-fendo* root $\theta\epsilon\nu$ Sec. 24.

8. The aspirated suffix or root determinative θ is found in $\pi\rho\acute{\eta}\theta\omega$, $\pi\lambda\acute{\eta}\theta\omega$, Sec. 36, 4, $\phi\theta\iota\nu\acute{\theta}\omega$, $\xi\sigma\theta\omega$ $\epsilon\sigma\theta\acute{\iota}\omega$ by dissimilation from the stem $\epsilon\delta\theta$, $\acute{\alpha}\iota\sigma\theta\omega$, $\beta\alpha\rho\acute{\upsilon}\theta\omega$, $\theta\alpha\lambda\acute{\epsilon}\theta\omega$, lengthened Homeric forms $\eta\gamma\epsilon\rho\acute{\epsilon}\theta\omicron\nu\tau\alpha\iota$, participle with

present reduplication, βιβάσθων, ἔσχεθον from aorist ἔσχον, imperfect ὀρέχθعون Il. XXIII. 30, of ὀρέγω, μετεκίαθον Od. I. 22.

9. In Greek and Latin the present stem very generally exhibits the form of derived verbs, the other tense stems that of primitive verbs, Sec. 39, 4; but the inverse relation also exists, e.g., in πέτομαι πετήσομαι, *petimus petivi petitum*, *cupimus cupivi*.

LXII. GREEK IMPERFECT.

The imperfect, which expresses duration in past time, is formed by annexing the prefix of past time to the present stem which conveys the idea of duration, as well as to stem-lengthenings, expressive of this idea and its modifications, with secondary personal endings. (a) Formation without tach-vowel: ἐτίθην, ἐδίδων, ἴστην, ἴην, ἐδείκνυν; ἔφην Sec. 60. Root ἐς 1st sing. ἦν with the σ dropped, ῆ with the ν rejected, ῆα, ἔα Ionic, 2nd sing. with the radical σ, ῆσθα, ἔησθα; 3rd sing. ῆν, ῆε(ν), ἔην, ἥην. 1st plural ῆμεν, Doric ῆμες; 2nd plural ῆτε, ῆστε, compare dual Sec. 52; 3rd plural ῆσαν from ῆσαντ, without augment ἔσαν, but retaining the σ of the root: on the other hand the Ionic present is ἔασι: early imperfect with a tach-vowel ἔον.

Εἶμι, Epic imperfect ῆια, Attic ῆα, ῆειν, Attic plural ῆειμεν with augment and present-tense intensification by the side of Epic ἴτην, ἴμεν, ἴσαν; Epic ῆομεν, ῆιον by the side of ῆσαν Sec. 52, with transition to the

tach-vowel conjugation. Compare Latin *eram* from *esam*, *asam*, with *m* in the 1st person singular as in *sum*, *inquam*, and in the compound imperfect in *bam* from *fuam*, a formation which, in default of the augment, and different primary and secondary personal endings, the language readily adopts. For the conjunctive optative of the imperfect *eram*, *essem*,—*sem*,—*rem* in composition, see Sec. 72.

(β) For the inflexion with tach-vowel *ἔφερον*, see Sec. 52. Contracted verbs *ἐτίμων*, etc., from *ἐτίμαον*, *j* being dropped between the verbal stem and the personal ending. Forms of inflexion without tach-vowel, as *ἐτίθεις*, *ἔδιδουν*, *ἴεις*, follow the example of the contracted verbs. 3rd plural *σαν* Sec. 52. Middle forms Sec. 53.

(2) COMPOUND TENSE-STEMS.

A. GREEK COMPOUND TENSES.

LXIII. COMPOUND AORIST. WEAK OR SIGMATIC (SO-CALLED 'FIRST') AORIST.

1. Relation to the strong aorist. Its function is the same as that of the simple aorist, to express momentary action in past time. But as the latter can only be formed from such (mostly root) verbs as have a present stem different from the bare stem or the root, whether this stem be vocalic, as *πείθω*, or consonantal as *τύπτω*, *βάλλω*, *μανθάνω*, *πάσχω*, the compound aorist, originally a supplementary one, is annexed to pure verbs, denominative verbs, and all verbs whose present stem is

the root itself, as in ἄρχω, λέγω, γράφω, or a mere nominal stem, lengthened by *j*, as in ἐλπίζω, φυλάσσω, τελέω, Sec. 39, 2. Only a comparatively small number of verbs, e.g. those with vowel lengthening or a dental suffix in the present, as πείθω, λείπω, τύπτω, and verbs in *μι*, have both aorist forms, in some cases with the difference of an intransitive, or neutral, and a transitive, or active signification, as for example ἵστημι, βαίνω. On the other hand the same verb very frequently has, besides the weak aorist active, the so-called second or strong aorist passive formed from the bare root, that is, from the stem of the strong aorist active with *ε*, *η* annexed, as ζεύγνυμι, ἔζευξα, ἐζύγην; βλάπτω, ἔβλαψα, ἐβλάβην. The formation of the compound aorist has, in the later period of the language, even where the strong aorist might have existed, displaced and overgrown the latter.

2. Formation of the compound aorist. The past tense of the root *as*, ἐς (*asam*) 'to be' is annexed to the verbal stem as auxiliary verb, with a long vowel in vowel stems, together with the augment. The vowel which begins the auxiliary verb is dropped. *μ* or *ν* falls away in the 1st sing. The stem-ending is *α*, only in 3rd sing. *ε*, ἔδειξε *adik-s-a(t)*. Second sing. imperative—*ον*. Original form from root *dik* was *adiksa(m)*, conjunctive *diksāmi*, optative *dik-saimi*. So ἔλῳσα, λύσω, λύσαιμι. Middle ἐλυσάμην, λύσωμαι, λυσαίμην. 2nd sing. ἐλύσω from ἐλυσασο. Imperative active λῦσον, with fixed *ν* and *ο* instead of *α*; middle λῦσαι instead of, as would

be expected, λυσασο, λυσω, compare the present form λύου from λυεο, λυεσο. σ is doubled in ἔσσα, root *fes*, ἐτέλεσσα, connected with ἐτέλεσα, stem *τελες*, τελέω, τελείω = τελεσῶ. σ is dropped after *f* in ἔκηα = ἐκηφα, ἔχεα Homeric ἔχενα = ἐχεφα, root *χv*; after stems ending in λ, μ, ν, ρ, with compensatory lengthening, as ἔσσεια, ἔνειμα, ἔφθηα—for ἔσσελσα, εμσα, ανσα,—ἡμῦνα, ἔκρινα, ἔκειρα by the side of Homeric ἔκελσα, ὦρσα, ἔκερσα, κύρσας. The σ is assimilated in the Æolic ἔνεμμα, ἔστελλαν, ἐγέννατο. Denominatives with *ja*, and contracted verbs, have, as in the future, a long vowel before the auxiliary verb, and *a* at the end of a stem is generally lengthened to *η*; ἐφίλησα, ἐτίμησα, ἐδήλωσα, except ἤροσα, ἐκάλεσα, ἤνεσα, and also, in analogy to verbs with the nominal stem *es*, ἐτέλεσα. Æolic optative forms are λύσεια, λύσειας, λύσειε, 3rd plural λύσειαν, instead of, as would be expected, λυσειην, λυσειης, λυσειη, λυσειεν in analogy to ιείην, τιθείην.

3. The earlier sigmatic aorist formation had a tach-vowel instead of the stem-ending *a* as in the imperfect and strong aorist of the O-conjugation; Homeric ἶξον, ἶξες = ἰκσ., ἐβήσето, δύσето, more frequent in the imperative λέξεο, ἄξετε, ὄρσεο, ὄρσευ; ὄρσο, δέξο, λέξο with *ε* elided from ὄρσεσο, etc.; οἶσε, οἶσετε, βήσεο, δύσεο.

LXIV. THE GREEK FUTURE.

This is formed like the compound aorist by means of an auxiliary verb from the root *es*, but in the form of

a present lengthened by the suffix *ja*, which as in many present stems, Sec. 61, gives it a future signification. Original form *asjami*, in the Greek *εσῶ*, weakened to *εσω*, *σω* compare Latin *ero* from *esio*. This form is preserved as an independent word in the middle voice, *ἔσσομαι* = *ἐσῶ*, whence *ἔσομαι*. Original form of the compound tense-stem *dasjami* = *δώσω*. Primary personal-endings as in the present. The various forms of the future are determined by the fuller or weaker form of the auxiliary verb, which is always added to the verbal stem after the final letter (*α*) by retaining or dropping the *σ* of the root of the auxiliary verb, (*β*) by vocalising *j* into *ι*, (*γ*) by changing *ι* into *ε*, or (*δ*) by dropping the original *j*.

1. The original Doric future in *σω* = *σῶ*, as *πραξίόμες* from *πραγσῶ*, *φυλαξίόμες*, *δωσίω*; compare desideratives in *σειω*.

2. The so-called Doric future, with *ι* changed to *ε* in the Attic middle forms, as *φενξοῦμαι* from *φενγσεομαι*, *πλευσοῦμαι*, so also *ἔσσειται*, by the side of *ἔσσεται*.

3. The ordinary form in which *j* is dropped, and the ending shortened to *σω* in stems which end in a mute or a vowel, as *λύσω*, *στήσω*, *δώσω*, *ἔασω*, *τιμήσω*; *τύψω*, *λείψω*, *πράξω*. The stem-vowel is lengthened as in the present in *φεύξομαι*, independently of the present in *πλεύσομαι*, *τεύξομαι*, *πεύσομαι*, *ἐλεύσομαι*, *φθήσομαι*, *λήψομαι* etc. The present reduplication is sometimes retained in

the future ; Homeric διδώσω Sec. 61, 3. Futures with a short vowel-stem-ending ἀρόσω, καλέσω ; see also Compound Aorist.

4. The asigmatic future results from dropping the σ between vowels, and the insertion of a tach-vowel ϵ between the stem and the ending, which can also be considered as a retention of the first sound of the auxiliary verb $\epsilon\sigma\omega$. In liquid stems, uncontracted Epic and Ionic $\tauενέ\omega$ from $\tauενε\sigma\omega$, $\kappaτενέ\omega$, $\muενέ\omega$, or contracted $\betaαλ\omega$, $\phiαν\omega$, $\alpha\muνν\omega$ Attic, by the side of isolated Epic forms where σ is retained without a tach-vowel, $\thetaέρσομαι$, $\kappaύρσω$, $\kappaέλσω$, $\kappaέρσω$, $\phiύρσω$ in stems in ρ and λ ; in other stems, as $\acute{\epsilon}δοῦμαι$ from $\acute{\epsilon}δεσομαι$, $\muαχούμαι$, Epic and Ionic $\muαχέσομαι$, $\piεσοῦμαι$ Epic $\piεσόμαι$, $\tauελέ\omega$ Epic, $\tauελ\omega$ Attic, so too $\tauελέσσω$, $\tauελέσω$, like the present, which itself indeed = $\tauελεσ\acute{\jmath}\omega$, Sec. 39, 2 ; $\kappaομῖ\omega$, $\kappaομῖέ\omega$, $\kappaομῖόμεν$ from $\kappaομῖε\sigma\omega$ *, without subsidiary vowel $\betaιβ\omega$ from $\betaιβάσω$, $\acute{\epsilon}λ\omega$, $\acute{\epsilon}λ\alpha\varsigma$, $\deltaαμῖ\omega$ from $\deltaαμάσω$, $\deltaαμῖ\varsigma$. This is the so-called Attic future in which σ is rejected and the word contracted. Future form without σ and contraction in verbal stems in ν , as $\alphaνύ\omega$ for $\alphaνύσω$ Il. IV. 56 ; $\acute{\epsilon}ρῶ$ XI. 454 *et passim* ; $\tauανύ\omega$ Od. XXI. 174. The latter by dropping the original σ pass into future forms which resemble the present.

* So Curtius, Gramm. Sec. 263. Perhaps more correctly from $\kappaομῖ-ε\sigma\omega$; stem $\kappaομῖ$, connected with $\kappaομῖδῃ$, whence $\kappaομῖζ\omega$ = $\kappaομῖ\acute{\jmath}\omega$, by the side of $\kappaομῖέ\omega$ in $\kappaομῖειν$ Od. VI. 207 ; so there lies at the root of the future forms $\acute{\epsilon}λπι\omega$, $\phiροντι\omega$, by the side of $\acute{\epsilon}λπίσω$, $\phiροντίσω$, $\acute{\epsilon}ρῖσω$, from $\delta\sigma\omega$, the weaker nominal stem $\acute{\epsilon}λπι$, for $\acute{\epsilon}λπι\delta$, thence the future $\acute{\epsilon}λπιε\sigma\omega$, $\acute{\epsilon}λπι\omega$.

5. The future without tense-characteristic. As such εἶμι Epic, Ionic, and Attic is especially used; the Epic verbal forms βέομαι, βείομαι, 2nd singular βέη, root βι Sec. 22, δῆω, ἔδομαι, πίομαι, νέομαι, by the side of the future form νίσομαι Il. XXIII. 76, χέομαι compare aor. ἔχεα with loss of both σ and ς, as τελέω, τελῶ from τελέσω.

LXV. THE COMPOUND OR WEAK GREEK PERFECT AND PLUPERFECT, TOGETHER WITH THE FUTURUM EXACTUM.

1. The perfect in κα is found in Homer only when the root ends in a vowel, and then not in all forms. βέβηκα coexists with 1st plural βέβᾱμεν, 3rd plural βεβᾶασι, βεβαῶς; ἔστηκα, ἔσταμεν, 2nd plural also ἔστητε; τέτληκα root τλα, τέτλαμεν, τετληῶς; τέθνηκα root θνα, Homeric infinitive τεθνάμεν; κέκμηκα root κμα κεκμηῶς; πέφυκα 3rd plural πεφύασι, δέδοικα plural δέδιμεν. In the later language κα is found after vowel, dental, and liquid stems, as πέπεικα, ἔσταλκα, ἔφθαρκα, κέκρικα, τέτακα, moreover ἐδήδοκα from the lengthened original stem ἐδ side by side with ἐδηδῶς. Akin to this form of the perfect are the aorist forms ἔθηκα, ἔδωκα, ἦκα from the vowel roots θε, δο, ἐ, confined however to the indicative. In regard to κ lengthening the stem in ὀλεκ ὀλέκω, compare the perfect ὀλώλεκα, and in ἦκω from root ἐ in ἦμι with a fixed perfect signification compare ἰλήκω in ἰλήκησι Od. XXI. 365. As regards the root-form πτακ in πτήσσω by the side of πτα in πτήτην, δακ, δαχ in διδάσκω by the side

of $\delta\alpha$ in $\delta\alpha\eta\gamma\alpha\iota$, $\epsilon\rho\acute{\upsilon}\kappa\omega$ by the side of $\epsilon\rho\acute{\upsilon}\omega$, the κ of the perfect comes to be considered as an original root determinative applied to form the tense.

2. The compound pluperfect in the earlier language is found chiefly in intransitive verbs, the perfect of which has the signification of the present. It is formed by the addition of a past tense from the root $\epsilon\varsigma$ to the perfect stem; 1st sing. originally $\epsilon\sigma\alpha(\mu)$, compare $\eta\gamma\acute{\nu}\epsilon\alpha$ *eram* Sec. 62, thence $\epsilon\alpha$, η , $\epsilon\iota\nu$: $\epsilon\pi\epsilon\pi\omicron\iota\theta\epsilon\alpha$ Ionic and Epic, thence η , $\epsilon\iota\nu$ Attic, compare $\pi\acute{o}\lambda\epsilon\iota\varsigma$ from $\pi\omicron\lambda\epsilon\alpha\varsigma$. 2nd sing. originally $\epsilon\sigma\alpha\varsigma$, thence $\epsilon\alpha\varsigma$ Ionic and Epic, $\eta\varsigma$, $\epsilon\iota\varsigma$ Attic. 3rd sing. originally $\epsilon\sigma\epsilon(\tau)$, thence $\epsilon\epsilon(\nu)$ Ionic, $\epsilon\iota$, η , $\epsilon\iota\nu$ Attic. 3rd plural $\epsilon\sigma\alpha\nu$ in which σ is retained.

3. The middle-passive *futurum exactum*, which expresses completion in futurity, is formed by the addition of the future ending in the middle form to the perfect stem, which implies the idea of completion. $\lambda\epsilon\lambda\acute{\upsilon}\sigma\omicron\mu\alpha\iota$ perfect stem $\lambda\epsilon\lambda\nu$ from $\lambda\acute{\epsilon}\lambda\nu\mu\alpha\iota$, $\pi\epsilon\pi\rho\acute{\alpha}\xi\epsilon\tau\alpha\iota$ stem $\pi\epsilon\pi\rho\alpha\gamma$, $\gamma\epsilon\gamma\rho\acute{\alpha}\psi\epsilon\tau\alpha\iota$, $\delta\epsilon\delta\eta\sigma\epsilon\tau\alpha\iota$. Isolated forms of the *futurum exactum* active from the perfect in $\kappa\alpha$: $\tau\epsilon\theta\nu\acute{\eta}\xi\omega$, $\epsilon\sigma\tau\acute{\eta}\xi\omega$.

LXVI. THE GREEK AORIST AND FUTURE PASSIVE.

1. The simpler form of the passive aorist, and the form more closely allied to the strong aorist active—whence it also is called ‘strong,’—or the so-called 2nd aorist, is formed by the addition to the root of the auxiliary

vowel ϵ (or perhaps the auxiliary verb ϵ , *to go*, in $\epsilon\eta\mu\iota$ with causative signification?), which is lengthened to η in the indicative and imperative; it takes the augment, and the active personal endings without tach-vowel; it is almost confined to verbs which have no strong aorist active: e.g. root $\phi\alpha\nu$ $\epsilon\phi\acute{\alpha}\nu\eta\nu$ etc., conjunctive $\phi\alpha\nu\acute{\epsilon}\omega$, $\phi\alpha\nu\tilde{\omega}$, optative $\phi\alpha\nu\epsilon\text{-}\iota\eta\text{-}\nu$ $\phi\alpha\nu\acute{\epsilon}\iota\eta\nu$. Imperative $\phi\acute{\alpha}\nu\eta\theta\iota$.

2. The weaker aorist passive, the so-called 1st aorist passive, only differs from the former in taking θ before ϵ , η , or in annexing, conformably to the laws of sound, the syllable $\theta\epsilon$ to the verbal stem partially lengthened as in the present; $\epsilon\pi\rho\acute{\alpha}\chi\theta\eta\nu$, $\epsilon\lambda\acute{\epsilon}\iota\phi\theta\eta\nu$, $\epsilon\psi\acute{\epsilon}\upsilon\sigma\theta\eta\nu$, $\epsilon\kappa\rho\acute{\iota}\theta\eta\nu$. This $\theta\epsilon$, perhaps the root $\theta\epsilon$, *to set, to do*, is here used in a passive signification,—compare *veneo, venum ire*. Cognate to this may be the formation of the German preterite of the weak conjugation by compounding the stem with the root of *tuon, to do*, answering to the Greek $\theta\epsilon$ Gothic *do*, O. H. G. *to*: thus Gothic *salbōda*, O. H. G., *salbōta*, H. G. *salbte*, though here certainly only with an active signification. Compare in Greek, the lengthening of the stem or formation of the present with θ in $\pi\rho\acute{\eta}\theta\omega$, root $\pi\rho\alpha$, $\phi\theta\iota\nu\acute{\iota}\theta\omega$, aorist form $\epsilon\sigma\chi\epsilon\theta\omicron\nu$, imperfect $\epsilon\phi\theta\iota\theta\omicron\nu$ Od. V. 110 (?).

3. The passive future forms are formed by annexing the future ending of the middle to the stems of the two passive aorists, or the middle form of the future from the root $\theta\epsilon$ $\theta\eta\sigma\omicron\mu\alpha\iota$ to the verbal stem; as $\phi\alpha\eta\acute{\iota}\sigma\omicron\mu\alpha\iota$,

λυθήσομαι. The Homeric dialect knows no future form in *θησομαι*, a passive future in *ησομαι* occurs clearly only once, *μυγήσεσθαι* Il. X. 365—on *δαήσομαι* compare perfect *δεδάηκα*—everywhere else in Homer the passive future is expressed by the middle forms.

B. LATIN COMPOUND TENSES.

I.XVII. SUMMARY.

On account of the poverty of the Latin language in forms of original verbal inflexion compound tense-stems and new formations are more numerous in it than in Greek. They are the following: (α) the two forms of the weak perfect in *si* and *ui, vi*; (β) the tense and modal forms derived from the perfect stem, that is to say, the *futurum exactum*, optative-conjunctive perfect, infinitive perfect, indicative and conjunctive pluperfect. These are compounds of the perfect stem with the future—properly the present with future signification, Sec. 64,—the optative-conjunctive present, the infinitive present, and the indicative and conjunctive-optative imperfect of the auxiliary verb *esse*. (γ) The indicative and conjunctive imperfect. (δ) The future in *bo*. With respect to the auxiliary verbs employed in these formations these verbal forms divide themselves into those with root or auxiliary verb *esse* and the endings *si, so, ro, sim, rim, sem, rem*, and those with root or auxiliary verb *fu*, Greek *φν*, and the endings *ui, vi, bam, bo*; both

roots are amalgamated in the endings *sso*,—from *viso*,—*uero, vero, uissem, vissem*.

LXVIII. WEAK LATIN PERFECT.

1. The perfect in *si* = *esi*, which is a remnant of a perfect form from root *es*, original *âsa*?—appears in primitive or stem verbs with consonantal root endings whether these be gutturals, dentals, or labials: *lexi* = *legsi* in *intellexi*, or *lēgi*, *panxi* from present stem *pang*, by the side of the earlier *pepigi*, *punxi* by the side of *pupugi*, *fluxi* from stem *flug*, *vixi* from *vig*, *traxi*, *vexi*, *rexi*; after *l* only in *vulsi*, after *n* in *mansi*, after *m* in *sumpsi*; *lusi*, *clausi*, *misi* from *lud-si* etc.; the guttural is dropped between *r* or *l* and *s* in *alsi*, stem *alg*, *fulsi fulg*, *indulsi*, *fulsi fulc*, *sparsi*, *mersi*, *torsi*. Regressive assimilation in *jussi* from *jubsi*, *cessi*, *pressi*; *ussi* from *us* in *uro* Sec. 33, *gessi*; *hausi*, *haesi* from *haus-si*. Syncopated forms *dixti*, *scripsti* with which compare the archaic infinitives *dixe*, *detraxe*, *despexe*, *surrexe*.

2. The perfect in *ui*, *vi*, from the perfect of the auxiliary verb *fui* with initial *f* dropped; *u* remains after a consonantal ending of the root or stem, after vowels it is hardened into the semi-vowel *v* in *vi*. (a) This form of the perfect is chiefly found in derived verbs—analogous to the contracted verbs in Greek—in *are*, *ēre*, *ire*, as *amavi* from *ama-fui*, *delevi*, *audivi*; verbs with infinitive in *are* and perfect in *ui* instead of *avi*, as the archaic form *necui* instead of *necavi*, *sonui* from *sonare*, form the

perfect from the present stem which is identical with the simple root *nec, son*, hence the ending is *ui* instead of *ai*; *avi* is from the present stem of derived verbs *ama, amo* from *amao*; verbs of the so-called 2nd conjugation in *eo* with perfect *ui* instead of *evi* form the perfect by dropping the stem-ending *e* as if from a consonantal stem: thus *monui* instead of *monevi*, so the participle passive with short tach-vowel *monitus, habitus*; *ferveo* hardens *v* to *b* in the perfect *ferbui*; *e* is retained in *abolevi, delevi*, and in verbs with an inchoative present form *suesco, quiesco*. The formation of the perfect of verbs in *io*, infinitive *īre*, by apocope of the *i* of the present stem is analogous; thus *salui, aperui* instead of *aperi-vi*; with syncope throughout in *rapio*, perfect *rapui*, infinitive *rapere*. On the other hand the perfect *ivi* of present stems in *esso*, as if from *essio*, in *arcessivi, capessivi, laccessivi*, coexists with the simple perfect *facessi*, participle *ītus*, infinitive *ēre*, by the side of *arcessire*. Perfects analogous to the *j*-stems where the present stem = the root: *petivi, quaesivi*. (β) The perfect form in *vi, ui*, is however found also in a number of root or stem verbs with a partially lengthened present stem in *no, sco*; to these belongs *eo, īvi*, which except in the supine *ītum* and in the changing of *i* to *e* before the vowels *a, o, u* passes over into the J-conjugation, Sec. 61, 1. 2; also *sero* = *siso*, perfect *sevi*, Sec. 61, 3, *lino livi levi, cresco crevi, sino sivi, gnosco gnovi*; certain verbs whose root ends in a consonant make by metathesis in the perfect *sterno stravi, sperno sprevi, tero trivi*; the perfect *ui* after roots ending in *l m n r*: *calui, colui, volui, con-*

sului, excellui, fremui, vomui, genui, tenui, supine *tentum*, compare *tetini* Sec. 59, *serui; strepui*; in *posui* from *pono* from *posino, posno*, where the root consonant *s* has been dropped, *s* reappears, hence the archaic form *posivi*, and *i* is then dropped, and we get the ending *ui* in *posui*; *ui* follows double consonants *texui, stertui*. (γ) Lastly, denominatives in *uo* from a noun-stem in *u* form the perfect in *ui* instead of *uvi* by syncope of *v* and shortening the *u*, like the derived verbs in *io*; as *acuo, arguo, statuo, tribuo*; *argui* from *arguvi*, *statui* from *statuvi*—stem *statu, tribu*—compare *audivi*.

3. A combination of the two forms of the compound perfect, the sigmatic in *si* and that in *ui*, takes place in perfect forms in *sui*, as *messui*, root *met*, compare *messum*, from *metsui, nexui* co-existing with *nexi* from *necto* stem *nec, pexui* a rare form for *pexi* from *pec-to*.

The *v* of the perfect ending *vi* disappears between vowels and *ii* is contracted to *i* in *isti, it, isse, peristis, redisse, nossem, audit, audissem* compare *dis* from *dives, ditior, sis*, from *si vis*; *v* is also dropped in the pluperfect and futurum exactum.

LXIX. TENSES AND MOODS FORMED FROM THE PERFECT.

1. Second future or futurum exactum. (α) The shorter and earlier form. To the bare verbal stem is annexed the future *so, sis, sit* from root *es* (compare *ero* from *esio, εστω, σω* Sec. 64) with the signification of the future—

or more properly *futurum exactum*, as *axo*, *capso*, *faxo*, *rapso*. (β) The longer and more recent formation: *so* is annexed to the perfect stem in *i* or *si*, *s* between vowels becoming *r*: *dedero* from *dediso*, *dederunt* from *dedisonti*, *stetero*, *scripsero*; syncopated forms of the perfect in *si*, *dixis* = *dic-si-sis*, *jussit* = *jub-si-sit*; *so* in the perfect stem of derived verbs in *vi*, *amasso* from *amaviso*, where *s* is doubled to compensate for dropping the perfect suffix *vi*, or by syncope and assimilation, *peccassit*, *habessit* from *havevisit* from the original perfect of the 2nd conjugation in *evi*. Instead of these archaic forms in which *s* is retained and *v* is assimilated to *ss*, the more developed language constructs forms with *r* as *amavero*, *habuero*; the last being produced by syncope of *e* at the end of the root and by vocalisation of *v*. (γ) In consideration of the clear and thorough-going signification of even the shorter forms, etc., as *futura exacta*, these also are to be regarded as early future forms of the *futurum exactum* constructed from the perfect stem with *i* syncopated, as *faxo* = *fac-si-so*, *faxim* = *fac-si-sim*. There lies at the root of these forms a hypothetical perfect form in *si faxi*, *axi*, *cap-si*, by the side of the perfect forms proceeding from the original reduplication *fēci*, *ēgi*, *cēpi*, Sec. 59, 3.

2. Conjunctive-optative perfect. The optative from root *es*, *sim* from *siem*, *esiem*, is annexed to the perfect stem: *fecerim* from *feci-siem* (or *fec-esim*?), *legerim* from *legisim*, *dederim* = *dedisim*, *tutuderim* = *tutudisim*. Archaic syncopated forms are *faxim* = *fac-si-sim* (see above,

faxo), *dixim*, *taxim* (indicative *tetigi*), *axim*, *comessim*, *con-jexim*, *ausim* = *audsi-sim*, compare indicative *ausi* by the side of *ausus sum*; *negassim* from *negavi-sim*, as *negaverim* with *r* instead of *s* and *e* instead of *i* before *r*, *habessim* from *habevi-sim*; *habuerim*.

3. For the infinitive perfect see above Secs. 40. 68, 1. Syncopated form *dixe*, archaic from *dic-si-sse*, *dixim*, *dixis*, *dixti*.

4. The pluperfect indicative ends in *ram* from *eram* = *esam*, compare $\tilde{\eta}\nu$, $\tilde{\eta}\alpha$, $\tilde{\epsilon}\alpha$ Sec. 62, annexed to the perfect stem in *i*: *feceram*, *dederam*, *steteram* = *dedi-sam*. Compare the passive *amatus eram*. Conjunctive *sem*—optative of the imperfect (*e*)*sam*, *esaim* compare *amem* from *amaim*, Sec. 56, 3—is annexed to the perfect stem in *i*, with the *s* doubled as in *essem*, *legissem* = *legi-sem*, *fecissem*, *fuissem* indicative *fueram*. Earlier syncopated forms are *faxem* from *fac-si-sem* (see above, *faxo*, *faxim*), *intellexem*, *dixem*.

LXX. FUTURE IN *ō*.

Besides the originally optative form in *e* of the stem-verbs of the 3rd conjugation, and the originally optative form of the derived verbs in *io* of the 4th conjugation which have *a* in the 1st sing., both of them optative forms which came to be used as futures,—besides also the termination *sō* from the root *es* applied to the perfect stem to form the *futurum exactum*; the Latin language forms another

special future, simple and precise in its signification, from derived verbs in *a*, *e* of the 1st and 2nd conjugations, by annexing *fu* of the present *fore*, root *fu* ($\phi\nu$), *to become*, to the present stem as the Greek future suffix in $\sigma\omega$ comes from the root $\epsilon\varsigma$. From *fu* comes by aphæresis *uo*, after vowels *vo*, which is hardened to *bo*, *bis*, *bit* (compare *bis* = *divis*), compare also the imperfect *bam* from *fuam* Sec. 71; *amabo*, *docebo*. This form of the future is rare in stem-verbs, as *ībo*, *dābo*, *stābo*; archaic also *dicēbo*, *audībo*, *scībo*; everywhere else, in conjugations 3 and 4, in consonantal, J and U stems, the optative form, with 1st sing. in *a* instead of *e*, elsewhere *ē*, which has passed into a future signification, is used as *legam leges*, *audiam*, *statuam*.

LXXI. IMPERFECT INDICATIVE.

The imperfect from root *fu*, *fuam*,—compare *eram* from *esam*—is annexed to the root or present stem like the future in *bo* by dropping the first letters and hardening the *u* by transition from *v* to *b*, *ībam*, *dābam*, *stābam*; stem verbs with a mere tach-vowel lengthen it anomalously to *ē* as *legēbam*, as also do derived verbs of the J conjugation *audiebam*, compare *dedērunt* from original *dedērunt*; derived verbs in *a* and *e* join *bam* without a tach-vowel to the vowel-ending of the stem: *amābam*, *docēbam*, and so do derived verbs in *i* in the earlier and later poetical language, *scībam*, *audībam*.

LXXII. IMPERFECT CONJUNCTIVE.

As the optative form *sem*, see Sec. 69, 4, is annexed to the perfect stem in the conjunctive pluperfect, to express the subjective idea of completion in past time, or in other words to denote the conditional preterite, so in the conjunctive imperfect it expresses subjectively duration in past time, that is the conditional present, by being annexed to the present stem. The conjunctive imperfect of the auxiliary verb as an independent verb is *essem* from *esaim* with *ss* instead of *esem*, *erem*, as might have been expected. (α) *sem* with *s* changed into *r* is annexed to a root ending in a vowel, as *forem* from *fosem*, *irem*, *darem*, *starem* = *stasem*. (β) *s* is retained without tach-vowel when the root ends in a consonant, as *essem* from *ed*, to eat = *edsem*, *possem* from *potsem* with regressive assimilation; with assimilated *s* (progressive assimilation) in *ferrem*, *vellem*, from *fersem*, *velsem*, compare *fert*, *vult*. (γ) In stem-verbs ending in a consonant, in those in *io* of the 3rd conjugation with syncopated inflexion, in those in *uo*, as well as those with a tach-vowel *ě*, and in derived verbs in *ā*, *ē*, *ī*, *sem* is changed into *rem* after a vowel, as *dicerem* from *dicesem*, *capere*m, *acuerem*, *amarem*, *docerem*, *audirem*.



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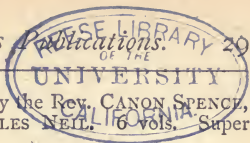
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